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Executive Secretary's Report

JESSE P. BOGUE

THIS IS my twelfth and final report to the American Association of Junior Colleges. These years have been rich and rewarding in both professional and personal experiences with the college administrators, faculties, and students. My contacts with you have been most pleasant at all times. Fully as much can be said for my relationships with senior colleges and universities, agencies of government both state and national, and with the many councils and associations in education. Our contacts have run into the multiplied hundreds. It is, therefore, only of the question at this time to recount them except in this general manner.

QUANTITATIVE PROGRESS

We have seen a great deal of progress in the expansions of the junior colleges and their services. Student enrollments have increased from 294,475 to 869,720, and we believe that the enrollments for the year 1957-58 will closely approach the one million mark. The total number of teachers has advanced from 11,859 to 29,651. The budget of the Association has increased from \$23,500 to \$52,336, and the public information project during the past year expended more than \$29,000. The circulation of the *Junior College Journal* has increased from 1,735 to more than 4,200. From a few hundred wartime

newsletters mailed intermittently, the *Junior College Newsletter*, with a new format and regular monthly mailings, has a circulation of better than 2,000. Other publications in the form of pamphlets, reprints from the *Journal*, and the annual *Junior College Directory* have been greatly expanded in number, and circulations have reached several hundred thousand per year.

While we have no yardstick to measure the influence of our publications and the many, many thousands of contacts made by the local colleges, we feel confident that the impact on the public mind has been considerable. On April 1, 1957, for example, we began a subscription to a press clipping service for editorials only about junior and community colleges. In 11 months, we have received 320 editorials from newspapers from all sections of the United States and not a single one was written in a critical vein, although there were some variations in the extent of approval. During these years, we have witnessed an increasing chorus of authoritative voices for junior and community colleges. Moreover, public interest and understanding may be somewhat measured by the fact that in 1957 no less than 38 state legislative bodies considered junior college enactments, and laws were passed in 35.

QUALITATIVE PROGRESS

It is even more difficult to apply exact measurements to the qualitative progress of the colleges during the past 12 years. We know, however, that much progress must have been made if we may accept regional accreditation as one measurement. During this period of time the number of junior colleges accredited by regional associations has increased from 171 to 348. We also know from first hand observations at state and regional conferences, at seminars and workshops, and with many college faculties that there have been deep concerns with the quality of instruction and learning in the junior colleges. We can say honestly that the administrators and teachers in junior colleges are ambitious and generally dedicated to the goal that every student shall be helped and inspired to develop his native talents to their maximum.

FIELD WORK

During our first year as executive secretary, we traveled, visited and consulted with junior college people in individual institutions, in conferences and at summer workshops in 57 different sections of the United States from Boston to Los Angeles, and from Port Huron, Michigan, to Gulfport, Mississippi. This has been about the pace for each of the intervening years. During the past year, we have had the excellent assistance of Dr. Edmund J. Gleazer, Jr. in a great deal of field work and extensive contacts with many different kinds of foundations and organizations. The work of your Association has expanded to the point where no one man can possibly carry the load. If the work is to be done, and there is every reason why it

must be done, it is my candid judgment that you should seriously consider ways and means to increase your Association's finances. It is in much the same position as your colleges. As enrollments mount, you are compelled to increase financial support.

In my judgment and from my experience in working with Dr. Gleazer during the past 15 months, your Board of Directors has selected a highly qualified and competent man as your executive secretary. He will take over the responsibilities of this office on April 1 of this year. We confidently believe that he will have the loyal support and cooperation of all junior colleges. In this connection, we might observe that 25 per cent of the junior colleges do not hold membership in the Association; yet the services of the Association have been extended in many ways to them. These colleges could very well add their strength by fuller cooperation, and we hope they may do so.

THE FUTURE

The past 12 years have been good. It would be pleasant to continue to review them. It is more important, however, to take a quick glance at the future. From the prologue of the past, we believe that junior and community colleges will educate the majority of students for the first two years as is the case now in some states. While private institutions will continue to draw students from wide and even national areas, community colleges will be located in well-planned state systems near the homes of the people and operated at low costs to the students. Some colleges will set certain selective standards for admission and retention of students, but community colleges will keep their doors

open to any person, either youth or adult, who can profit by what the colleges can offer, and the colleges will strive to offer what the people can profit by. While independent colleges will be supported by tuitions and gifts from various sources, community colleges will be locally controlled and financed, although state assistance will be greatly increased as a matter of necessity and fairness. We shall see the organization of large junior college districts in rapidly increasing numbers to give the institutions broad support at a price which taxpayers can afford to pay.

The comprehensive nature of the junior colleges will bring about much greater attention to student personnel services and to well-organized college level vocational-technical curriculums integrated with liberal studies for employment and citizenship. There will inevitably be better coordination, articulation, and cooperation between junior and senior colleges and universities for the welfare of the students and the nation.

To accomplish these ends, we must secure many outstanding men and women, highly educated and dedicated as administrators. We shall need to recruit thousands of competent teachers. We must promote by all reasonable means the construction of efficient physical facilities so that students may have during their years in these institutions as good opportunities in higher education as they would have in senior colleges and universities for the same comparable period of time. The several states and the constituencies of independent colleges cannot contend that the junior colleges must assume more and more responsibility in higher education and in the same breath tell them to "make brick without straw."

CONCLUSION

As a final word I would urge you, if any urging is needed, to focus your best possible attention on the individual student. Do all you can to counsel and guide him in the way that he should go, for the kind of person he should be, and prepare him as thoroughly as possible for the life he will live and the work he will do. Look with favor on every young man and woman and every adult who enters your doors because they are scared and stand before you in that dignity. No matter how skilled they may be when they leave your colleges, it will be of greater significance for them, their families, their communities, and the world that they have been inspired and educated to think clearly, to act with consideration and justice toward other people, and to be both able and willing to discharge their family, occupational, and civic duties with devotion and enthusiasm.

There are convincing evidences on every hand for those who will observe them that our greatest problems in business and industry, in government and international relations, in our schools and colleges, in our communities and our homes, yes, and in the world of recreation and sports are to be found not so much in our lags and defects in scientific and technical skills and competence but in the relations of human beings to one another.

Last summer the manager of a great baseball club was fired. He was a national figure in the world of sports. When the question was asked before a Grandstand Managers Club for the reason, the General Manager of the Club was quoted as saying, "No man knows as much about baseball and less about people."

The Junior College—Bigger! Better?

EDMUND J. GLEAZER, JR.

THIS ASSOCIATION has given me an unusual opportunity. As far as I know, I am the only person to have had the privilege of devoting his full time to the presidency of the American Association of Junior Colleges. You will realize that this was so because I was requested by the Board of Directors to direct a program of public information for this organization during the year 1957.

I have traveled to many parts of the country and sought to interpret the junior colleges, their purposes, programs, and needs to many people and organizations. I have visited many junior colleges and participated in educational conferences at the state, regional, and national levels. Now before passing on the gavel to your new president I want to tell you about some impressions I have of the junior college movement. These impressions are somewhat subjective. Perhaps they could be described more accurately as feelings, and in 15 minutes much will be left unsaid. I cannot talk about the dramatic growth of the junior colleges and the essential services they are providing to our nation. We shall have to assume some of these things—after all, they are well known to you. We can certainly agree that the junior college is getting bigger every year. I want to suggest some ways by which it can also become better.

Let me make five proposals—these can be counted conveniently on one hand. As

the thumb in its opposition to the four fingers gives manipulative ability and strength to the hand, just so the excellent college has a basic and underlying sense of purpose which gives meaning and character to all of its activities. *I am concerned that junior colleges clarify their objectives.* We need to know why the junior college exists. We need to make more specific the objects of our activities. This is purposiveness. It is a posture which implies aims, consciously and deliberately defined. It means clearcut intentions, resolve, and plan.

Let me hasten to say that junior colleges are not alone in the necessity for clarification of the goals of education. However, we need to work at this problem in a most diligent way because of the set of circumstances in which we find ourselves.

The junior college is a new institution comparatively. Not many years ago our programs were designed primarily to prepare students for upper division work in the senior colleges. Social and economic developments in our society have resulted in educational needs that have required a great broadening in the kinds of educational services provided by the community and junior colleges. Adult education, vocational-technical curriculums, and general education programs are offered today by the majority of our institutions. Our movement is immersed in a sea of forces that calls for a response in

service—a growing number of adults, more leisure time, necessity for upgrading and re-training people in certain vocations, college aspirations by more young people, more young people of college age, developing technology, etc.

These forces will not decrease but will multiply during the years ahead of us. I am reminded of the experience of the tourist who drives through the Holland tunnel and emerges into Manhattan. He sees signs reading "Uptown," "Downtown," "Crosstown." He is pushed along by traffic from the rear. Policemen ahead of him gesture madly to keep him moving. So because there is nothing else he can do, he keeps moving, but he is not sure of whether he is going uptown or downtown. We need somehow, someway, to check our directions.

We like to believe that there is a kind of junior college philosophy which has developed and which gives us direction. Our educational ideals and values can assist in this process of clarifying institutional objectives. But we have a rather unique problem here. Many teachers and administrators in junior colleges have never been students in these institutions. Many have never had graduate courses in which they have considered the spirit and form of the junior college. Not many of our institutions take the time or provide the opportunity for this kind of study by faculty and staff and students.

The great values in examination of objectives in a context of a junior college philosophy are not confined to the people directly identified with the institution. We have felt keenly the need for wider public understanding and for growing support of a moral and financial nature. There is no finer way to promote understanding

and consequent support than through a study of objectives which involves the constituency of a college—teachers, administrators, students, board members, alumni, and citizens. This is the highest level of public relations.

There are many kinds of junior colleges. Different colleges will have different objectives. I am calling for a point of view more than anything else. You might call it a research approach. We need collectively to inquire, ask, test, discuss, reflect, and develop. This process produces maturity and competence in a faculty and understanding and support in a community. I am urging that we *decide* what our course will be; that we decide consciously and intelligently what it is we ought to do. If we do not decide, then environmental pressures, circumstances and coincidence, and the pull of tradition will shape our course. I can think of no greater need in our society today, in and outside of the junior colleges, than for people who will engage in that most difficult, most trying, but most rewarding quest—the search for "Why?" and "What."

This brings me to my next observation: A clarification of aims is the first and most essential step in *achieving quality in the work done*. There is no way to determine the degree of excellence in our programs until we know what it is we are trying to do. I cannot tell you how good a knife is until I know whether it is to be used to open mail, carve a piece of soap, skin a deer, or cut sugar cane. The first step toward quality is to have a clearcut idea of what it is we want to do and ought to do. We have here one of the major reasons why we must be increasingly intent upon excellence in our work—we are called upon to do so many things. Can our insti-

tutions be this versatile? In view of the wide range of abilities, interests, aptitudes, and goals of our students, can the multi-track institution, the comprehensive junior college, maintain programs of high quality?

There are many people in this country who honestly doubt whether the junior college can do this kind of work. They are of the opinion that we attempt too much, that our counseling services are not adequate to the job, that we are not strong enough financially to enlist the finest teachers. Rather than be defensive in our reaction it will be well for us to evaluate our programs candidly and consistently in terms of the product—the success of the student. It is not enough to say that studies have indicated that junior college transfer students do as well or better than native students in the senior institutions. This could be a most dangerous opiate. Some transfer students from some junior colleges have done this well. What do you know about the specific students who have gone on from your institution to senior college or into a vocation? We have relatively few institutions which continuously, systematically, and competently measure the quality of their programs by what happens to their students.

The junior college is still proving itself. It has a particularly difficult task. Strenuous measures will be required to maintain a high level of performance. Perhaps an institution needs to know itself just as an individual does and frankly and honestly limit itself to those areas of work which it can handle with a substantial degree of quality. My proposal here is for a wholesome degree of scientific humility, a disposition to evaluate the product and to

discipline the program to those activities which can be done well.

My third plea is for junior colleges of integrity. By "integrity" I mean "wholeness." The junior college of strength will "have a meaning and a competence in its own right." The junior college will have its own individuality. It will provide learning experiences of value in and of themselves. The junior college is not the penthouse for the high school nor the first two floors of the senior institution. It is an identifiable educational experience with distinct qualities and characteristics. The plant, faculty, administration, control, finance, and program of study will be appropriate to its wholeness, its integrity. The junior college of integrity will establish a program to meet the needs of the people it serves. It will avoid comparisons—smaller than senior colleges, better teaching than, closer to the community than. It will compare itself with what it ought to be.

But at the same time that we acknowledge institutional identity, we hasten to emphasize the necessity for *effective relationships with other parts of the educational structure*. I wish particularly to mention the need in the field of higher education. If junior colleges are to be recognized as part of the structure of higher education, then our faculties and administrative officers need to find some common ground upon which they can meet with the faculties and administrators of other institutions of higher education. Unfortunately, several states have no comprehensive organization for higher education. Communication and planning is thereby weakened. In our opinion, too, it is unfortunate that state college foundations for securing support of business and

industry do not include, in most cases, qualified junior colleges. We need, in the field of education, to identify common interests and to provide for effective communication, to approach common problems in ways that will be economical in terms of time, energy and money.

The demands placed upon higher education today require increasing cooperation among various kinds of institutions although each type of college has its own individuality and peculiar role. I would urge junior college personnel to take initiative in promoting professional interrelationships between faculties and staffs of junior colleges and other institutions of higher education.

Particularly should this type of association be provided for on a state and regional level. An interesting and helpful development in this direction is the Joint Committee of the Association of American Colleges and this association, which was established to identify areas of mutual interest and to suggest ways by which our institutions might coordinate their functions.

And now one final comment. The Educational Policies Commission of the National Education Association described junior colleges as "not bound to the four-year tradition, ordinarily sensitive to local needs and conditions and aspirations. . . ." Now I want to ask a question and express a hope. Is it not true that to a large extent our junior colleges have been bound to the four-year tradition? My hope is that our institutions will exhibit in their own operations the same characteristics they prize in outstanding students. The su-

perior student is alert, alive, responsive, sensitive, curious, experimental, and to some extent iconoclastic. In my opinion, if the junior colleges have been fairly prosaic in their programs, there are valid reasons. The requirements of universities, the minority status of the movement until recently, and certain organizational and financial problems have been among factors limiting the junior college in experimental, unconventional, and non-traditional approaches to the educational process.

However, as our numbers grow, as our objectives are clarified, as we discipline ourselves to the work that can be done well, as we establish our identity and integrity, and as we relate ourselves effectively to other agencies of education, I believe that *we are under obligation to exercise more initiative and freedom and imagination and ingenuity in the development of our programs.* We urgently need the people and the institutions competent enough and secure enough to give this kind of leadership.

I believe with all my heart in those causes which can move people to fulfill their God-given potentials. The junior college in this democratic society can be—ought to be—that kind of cause. You have honored me through your invitation to continue to serve you in the days ahead.

I pledge to you my continuing and responsible endeavor to measure up to the standard of service you have the right to expect of your executive director—a standard so well achieved by my predecessor and tutor, Dr. Jesse P. Bogue.

Welcome Address

G. MENNEN WILLIAMS

THE TWENTIETH century can lay claim to many great achievements in education, but when the history of education in this century is finally written, one of its brightest pages, I am sure, will be the development of junior or community colleges.

The first local public junior college, I am told, was established in our neighboring state of Illinois in 1906. Michigan established its first junior college not long thereafter—in this very city in which we meet—Grand Rapids, in 1914. Nine years later, the second such school was established in Michigan at Port Huron, and in the years since the number has grown to 15.

Junior or community colleges have expanded throughout the nation and are today a vital link in the educational chain. It is therefore a great pleasure to welcome your national association to Michigan. You will find here a climate of public opinion most friendly to the work in which you are engaged.

Junior or community colleges have grown to their present immense role in education because they serve a public need directly and efficiently. They expand the opportunity for all high school graduates to carry their education further, they relieve in part the growing burden on our four-year colleges and universities. They give business, industry, and agriculture

better educated manpower right in the home community for the ultimate benefit of the whole community.

Further, these colleges serve the tremendous field of adult education which each year grows in community importance. Nationwide, almost 8,000,000 adults attended at least one formal adult education class at some level of schooling last year. This demonstrates the dimension of the public response to this service.

Junior and community colleges also provide a place for the retraining of people to enable them to keep up with new advances in the business and industry of the community. Since we live in an era of rapid technological changes, this area of service grows more valuable with each passing day. And most important today when America needs the fullest development of our human resources to meet the world-wide Soviet challenge to our way of life, junior or community colleges encourage more of our better high school graduates to continue their education. Many students find in the terminal programs of community colleges the degree of training they need. Others find the inspiration to go further.

Junior or community colleges, in short, provide increased educational opportunity at lower cost and thereby strengthen the community, the state and the nation.

In the past, America has been wasteful in the conservation and development of

G. MENNEN WILLIAMS is Governor of the State of Michigan.

our great endowment of material resources. We have been wasteful, also, I fear, in the development of our human resources. No youth should ever be priced out of the education market. All young men and women should have the opportunity to carry on in education as far as their abilities will take them. Yet national figures show that about one-half of the top 20 per cent of high school classes do not go further because these students cannot afford to.

The colleges you represent can rescue this loss of skills and talents. This is a service of incalculable value because among these youth, whose intellectual growth is now not fulfilled, there could be great leaders to guide the people in the problems and opportunities of the years ahead.

Experiencing the value of higher education at the community college level will naturally lead many students to take the next step in the four-year institution. The expansion of junior colleges should not therefore be looked upon as a substitute for the needed expansion of our institutions of higher education. One does not replace the other, rather they supplement each other, each performing a vital service in developing our educational facilities.

The state government in Michigan has given continuous and consistent support to the junior and community college concept. These institutions in Michigan enroll more than three times the number of stu-

dents now than were in attendance as short a time as five years ago. This year we hope to increase our support by increased funds, both for operation and to help local communities expand their community college buildings. At the same time we seek to meet the real need for new buildings on the four-year campuses and to provide increased funds for administration therein as well.

Concurrently there should be a realistic program of federal assistance to these institutions. The federal government has an inescapable responsibility to further education, particularly in this age of Sputnik when education is the doorway not only to survival but to the achievement of prosperity and peace at home and throughout the world. There is no cause, I believe, more important in the public interest today than the cause of education.

There will always be, of course, problems to be resolved, problems at every level of education—problems of financing, of areas of service, of curriculums, of adequate pay for teachers, of the relationship of junior colleges to the community and to the four-year institutions of higher learning. As you work on these problems, you can be assured that you have public support for your efforts. It is my conviction that the public wants American education to be second to none in the world. I am sure this goal can be achieved and maintained in every area if we set our hearts and minds to the task.

No Master Plan!

JOHN A. HANNAH

COLLEGE and university presidents seldom lack opportunities to make speeches. As one called upon to make too many of them, I too often feel that they are a waste of time for both the speaker and his audience. As for the audience, on this occasion you must judge for yourselves, but for me, this is one of the uncommon opportunities that affords real personal pleasure for many reasons.

First, it is an honor to have the opportunity to supplement the greetings of Governor Williams, who has proved himself consistently to be, and as he has indicated again this morning is, a good friend of education at all levels. It is gratifying to be in a position to remind you that as in so many other educational movements, Michigan is entitled to be numbered among the pioneers in the junior college movement. President Tappan of the University of Michigan almost 100 years ago was among the first educational administrators to sense the need for, and to encourage, the development of a system for providing lower level education of collegiate grade at places removed from the main center. Grand Rapids Junior College, your host institution, was created in the early days of the junior college movement and has served this community and this state with distinction for more than 40 years.

JOHN A. HANNAH is President of Michigan State University, East Lansing, Michigan.

If you will pardon a personal reference, I have first-hand knowledge of the value of junior colleges. I am a product of the Grand Rapids Junior College and have said on many occasions if it had not been for the opportunity it afforded me, it is doubtful that I would have been able to continue my education beyond high school. From my deep appreciation of that opportunity springs my long-continuing interest in junior colleges and in the junior college movement and my high regard for their great contribution on the American educational scene.

I am proud to be able to say that Michigan State University, the institution that has endured me for these many years, has long been on the side of the junior colleges and has done what it could to stimulate their development. Dr. Max S. Smith, well-known to many of you as an educator and junior college administrator, joined our staff several years ago to develop a closer working relationship between our university and the junior or community colleges of Michigan, a relationship we warmly desired. He was among the first to be assigned such responsibilities in this part of the country, and his work has demonstrated effectively that junior colleges and four-year universities can work together to their mutual benefit.

President Arthur Adams of the American Council on Education was quoted recently in one of your publications as de-

ploring the fact that while four-year colleges and universities often profess their interest in working with community colleges, relatively few of them actually do so much as print in their catalogs any information concerning the steps to be taken by junior college graduates who wish to transfer to their institutions. On this point, the Michigan State University is in the clear.

More than that, we publish a counseling booklet for prospective junior college transfers, going into considerable detail concerning both the mechanics of transferring and the courses of study available to them. We do more; we have revised our annual orientation week programs to include special services for transfer students in recognition of the fact that they have problems and interests far different from those of the entering freshmen. We offer specially designed courses in our College of Education to prepare junior college teachers and administrators. We are especially proud of the fact that our university received the first grant of its kind from the National Science Foundation to underwrite an institute for community-junior college science and mathematics teachers to be held on our campus this coming summer. All of this is cited to qualify me as a friend of the junior colleges, a believer in what they do, and an admirer of what they are.

One other circumstance contributes to the feeling of being among friends this morning. In reviewing the history of the junior colleges, one is struck by the many parallels between their history and that of the system of land-grant colleges and universities, of which Michigan State was the pioneer.

Both systems developed out of the ar-

dent efforts of small groups of citizens with deeply-felt convictions that there were links missing in the chain of American education. Both had their difficulties in becoming established in none-too-friendly climates against the opposition of older, well-established educational interests. Both were subject to misunderstanding, disparagement, and occasional derision as being something less than legitimate claimants to a place in the world of higher education.

It has often been said that the land-grant colleges and universities have prospered because they are close to the hearts of the people. The same, I believe, can be said of the junior colleges of America. They, too, came into being because they sought to meet an unfilled need. They represent a typical American solution to a problem recognized by the people themselves.

Our institutions are akin because all of us believe that knowledge is a tool to be put to work for the benefit of ordinary people, not a polished gem to be admired by the many but to adorn only a few. Our institutions are alike because, being so close to people, they are quickly responsive to society's needs as they can be identified. But most of all, they are alike in that they are dedicated to the philosophy that every American is entitled to equality of educational opportunity. In their day-to-day operations they help our nation to move ever closer to the achievement of that goal.

The British are justly proud of what they call their "unwritten constitution." In this country we take equal pride in our written Constitution and its appended Bill of Rights. But we too have something of an unwritten constitution. The written

document makes no mention of a guarantee of equality of educational opportunity, but it exists all the same. It lives on, from generation to generation, in the hearts and minds of the American people, the great majority of whom consider it just as valid and effective as though it were set down in explicit terms in the Constitution itself.

This continuing belief traces its ancestry back to an older document—the Declaration of Independence—wherein is proclaimed our belief that among the inalienable rights enjoyed by freeborn men and women as equals is the right of pursuit of happiness. Americans have always believed that one of the best roads to follow in the pursuit of happiness was the road to education, because such a road, ideally, is free from all artificial barriers of intolerance, prejudice, discrimination, caste, and social or economic status—all those things which impair the equality with which each of us is endowed.

One of the most dynamic movements in American higher education today is the development of junior colleges. This should not be considered an isolated phenomenon; it is instead the renewed outbreak of the determination of the American people to have access to the benefits of education. It is a heartening indication of the strength of our democratic philosophy, encouraging evidence that we as a people intend to make continuing progress towards the realization of our ideal of equality in educational opportunity.

In reviewing the history of the American junior college, I am impressed again by the fact that so many significant developments in our social, political, and educational systems have come, not as the result of decrees imposed from above, but

as the healthy spontaneous reaction of intelligent and responsible people to the stimuli of recognized social, political, and educational needs.

Junior colleges did not originate because some one wise man, or group of men, pondered the situation and developed a plan for bringing them into existence. They are not growing in numbers steadily and rapidly because someone has so ordained. Leadership there has been, to be sure, and so young is this movement that much of it is represented here today. But the important point is that such leadership has developed locally in response to local needs and conditions and the clamor of people to be led.

It is meant as no disparagement of such leadership to quote an old friend and former Director of the Agricultural Extension Program on our campus on the subject of leadership. In his dry manner, he once remarked that a leader is a man with eyes good enough to see where people are headed and with enough speed afoot to get in front of them. It is meant to emphasize the point that when the people of this country decided that junior colleges would be a good thing to have, the leadership naturally emerged from among their numbers. This development came about from no master plan. As a natural consequence, we see a wide variety of patterns of development, both within and among the states.

Nor would a uniform plan be desirable or acceptable to the majority of Americans, because if junior colleges are to be fully effective and successful, they must reflect accurately the needs and aspirations of the communities they serve, and be sufficiently flexible to adjust quickly to

changing conditions within those communities.

A rigid master plan might simplify certain situations and make easier the solution of one of the major problems with which you are confronted—articulation with the four-year colleges and universities. They, too, have developed their own systems and standards, and for you to attempt to prepare all of your students in your college-parallel courses to enter all colleges and universities as transfer students presents you with a task nearly impossible to accomplish. But the experience at my own university in ironing out these difficulties, and far and far broader experiences in California and elsewhere, indicate plainly that these problems *can* be solved by men of good will and dedicated purpose.

One way for the four-year colleges and universities to demonstrate their good will in this matter is to give greater emphasis to the recruitment and preparation of capable young people to teach in the junior colleges, which operate under special conditions for which special preparation is needed. We should not go on forever meeting the faculty needs of the junior colleges by moving high school teachers into junior college jobs.

It appears from all evidence at hand that this is a problem not generally recognized by the teacher-preparation institutions, and it would seem to be your responsibility to make the seriousness of the situation known and to take the initiative in arranging with the universities to give more emphasis to the preparation of teachers to meet your special requirements. You will find most of them receptive to your approaches and willing to do what they can to be of help to you.

Perhaps an aggressive program in this direction would do much to achieve fuller acceptance of the undoubted truth that all of education—from kindergarten through the graduate school and beyond into adult education—is not to be represented as a series of closed boxes, but as a structure with each room opening to the one ahead and to the one behind. Too many educators tend to think of their own narrow fields of interest as being the most important and to care too little about what happens to the other parts. We have no master plan requiring our educational structure to be in the form of a ranch house; for example, split-levels and two-story colonials are perfectly acceptable in the proper local settings. What is important is that there be freedom of movement, understanding, and above all, tolerance and respect for those who live within the structure.

The current public furor over the adequacies of our educational system make the truth of this observation painfully clear to all of us. It is good that the public has become interested in the quality of its educational system; perhaps we can capitalize upon the situation to bring about improvements and reforms long overdue. It is to be deplored, however, that there is so much finger-pointing and 'blame-shifting among educators themselves.

Certainly if we are smart enough to carry the responsibilities that are ours we should be smart enough to detect our own weaknesses and to correct them. If we are not, perhaps we deserve to have the tinkering done by outsiders who do not always criticize for the purest of reasons and in a fully objective spirit. Not that valid, constructive criticism is to be ignored; some-

times we make the mistake of shutting out the voices of those who have legitimate complaints and helpful suggestions to offer, preferring to listen instead to those in our profession who think as we think, talk as we talk, and do as we do.

This is a special area of caution for the junior colleges, which of necessity must be immediately responsive to the needs of the communities they serve. You have built your splendid record of achievement by listening to the people in your communities and trying your best to serve them as they need to be served. If the junior college movement is to flourish, you must keep open the channels of communication with those who sustain your colleges and be willing to listen to their suggestions when made in good faith. Necessarily, you must apply your professional judgment, but the usefulness of any educational institution diminishes the moment it erects artificial barriers between itself and those it serves.

One other word of warning: there are those who look upon the establishment of more junior-community colleges as the absolute answer for the problem of how to care for the increasing numbers of students soon to be graduating from our high schools. Certainly they can and will help relieve the pressure on the four-year colleges and universities at the freshman and sophomore levels, but they must not permit themselves to be looked upon as a panacea that is the total answer to the problem. By opening wider the doors of opportunity, they should, they will, encourage still more youngsters to aspire to college degrees and tend to increase rather than decrease the total load on the degree-granting universities and colleges.

Beyond doubt, American education is

now at one of the recurrent crisis stages in its long development. It is being beset by those who feel that somehow our schools and colleges are responsible for their feelings of insecurity. It is confronted with the gigantic task of teaching unprecedented numbers of young people in times when some people are talking as though our high birth rate were a national calamity, instead of a providential blessing. And above all, it is hard-pressed for money with which to carry out its historic mission.

Many of us in higher education find ourselves handicapped by a public state of mind which developed without anyone thinking much about it. What happened was that a sort of master plan developed, and was accepted, and now it turns out to be a straitjacket from which to escape would challenge the talents of a Houdini.

We have seen that the American people have always believed in equality of educational opportunity, and step by step, have come ever closer to achieving their ideal. They began with grammar schools operated at community expense. They progressed to secondary schools in a historic breakthrough marked by the decision in the Kalamazoo case. They made some progress in the field of higher education when in Michigan, as in many other states, they decreed by law long ago that no tuition should be charged to students at public colleges and universities. No one in the last 50 years has seriously challenged the belief that it was to the benefit of society to have all of its young people receive a certain amount of schooling and that the general public should share the cost.

Horace Mann and others of his era were instrumental in persuading their fellow

citizens that the education each youngster should have could be imparted and absorbed in 12 years, and the great majority of our school systems were set up to provide 12 years of schooling. The result, which would be amusing if it were not so tragic in its implications, was that a certain magic attached to the numeral 12. That magic operates to persuade some people that 12 years of schooling should be provided at public expense because that much benefits society generally, whereas after 12 years a student should pay all or a major part of his expenses because he himself now becomes the principal beneficiary of his experience!

The patent absurdity of such reasoning is quickly exposed by listing the tremendous changes that have taken place in our society since we adopted that magic number 12. Think of the infinitely greater number of things a high school senior must know or understand to get along in the world today compared with what a high school senior had to know and understand 50 or 60 years ago.

A high school graduate in 1900 was prepared to take his place in most of the vocations and some of the professions. Now, as attested by the fact that most of you offer two additional years of vocational training, he needs at least two more years of schooling to enter most of the vocational and subprofessional fields. He needs four years or more of additional preparation to take his place in the higher vocations and the professions.

The pertinent question is this: If society undertook to prepare a youngster for his life work by financing fully 12 years of education a half a century ago, is it in any sense less responsible to give the youngster of 1958 equal preparation,

even though he may require 14 or 16 or even 18 years to fit himself to do the nation's work? Logic compels us to answer that no less responsibility rests upon us in this era—but many still cling to the outmoded notion that 12 years of education is all to which a youngster is entitled at public expense!

Ideally, we should be moving as a nation steadily in the direction of reducing or abolishing tuition charges for students at public institutions at whatever level of study and finding acceptable means of helping privately-supported colleges and universities meet their mounting financial obligations. The sad truth of the matter is that we are moving in the other direction. Incomprehensible as it may be in view of the testimony of history that the welfare and progress of America depend to a high degree upon widespread educational opportunity, there are many who seek to make it *more* difficult for promising young people to go to college, rather than *less* difficult. Those who profess to believe that a college student should pay all or the greater part of his educational costs put the question something like this: Why should the high school graduate who takes a job in an automobile plant help pay for the education of his buddy who goes to college?

The answer is that his buddy may some day be the teacher of his children, the minister who attends to his spiritual needs, the doctor who saves his life, the lawyer who defends his liberty, the chemist who discovers the cure for cancer, the industrialist who makes the necessities of life less expensive for him to buy, the physicist who harnesses atomic energy to improve his standard of living, the farmer who provides him with better food at a lower

cost, the military leader who defends his security, the police executive who guards his safety, the home economist who improves his health through better nutrition, or just the plain ordinary citizen who helps preserve his country and his way of life by assuming willingly the obligations of citizenship.

It is difficult to be patient with those who say we cannot afford education for the nation's youth when we see the amount annually spent on luxury and personal indulgence. This is like a man saying he cannot afford to work his gold mine because he has so many things to buy for himself, like cigarettes and liquor and a new speed boat and a new hunting rifle—plus a mink coat for his wife. The facts are that this country cannot afford to spend less on education than whatever amount is required to provide an adequate educational opportunity for every bright ambitious youngster who wants to be educated will work at it and who can make good use of it.

The current situation in higher education has one inherent danger of which we are all well aware. It is that we become so preoccupied with the enormous problem of providing for increasing numbers of students that we neglect or forget that our primary responsibility is to safeguard and improve the quality of education offered to them. The whole educational establishment must share the responsibility to scrutinize both the content of individual courses and the organization of courses to the end that there be no waste of the time of either students or faculty on non-essentials.

We must work together to increase substantially the study of other languages and other cultures to give our students better

understanding of the problems of a confused, suspicious, and divided world. Our courses of study in the Western traditions must be augmented by study of nations in Asia, Africa—indeed, the whole world—if our educational programs are to meet the quality tests imposed by the era in which we live.

Another area of special interest to junior colleges is that of adult education. Is it not part of your responsibility to develop an understanding of world conditions and America's world responsibilities among the adults in your communities as well as among the students on your campuses? Here is an opportunity for the community college to exert tremendous influence for good.

Higher education must refuse to accept either the extremity of holding enrollments at current levels to preserve existing quality, or of accepting all comers with the consequent dilution of educational quality. Somewhere between the extremes lies the right answer. It is our responsibility as educators to help find the way out of this difficulty and to warn the American people of the peril of accepting the alternatives. It is heartening to know that so many institutions are addressing themselves to this matter, with faculties and administrators working together in seeking the answer demanded by the times in which we live.

I will not resort to any lengthy reference to the fact that our very existence requires that we compete successfully in the world with the Soviet Communists, who raise no questions of their people about affording the cost of the education required to gain the world dominance they seek. They do not raise the question of can we afford it? or how much of the

cost should be collected from the student or his parents? Education at all levels in Russia is free to those who can make good use of the opportunity. If a majority of our fellow citizens ever become convinced that we in America cannot afford the education we need, then God help us all, for the days of our country's greatness and leadership are numbered.

I do not believe that they will ever be so convinced. The rapid growth and development of community-junior colleges is a renewed demonstration of their belief

in education, of their faith in the ability of education to make this a better country and a better world, and of their determination that whatever the right kind of education costs, they will pay for it. No other expenditure of public funds begins to produce comparable returns in terms of benefit to our country and enrichment of the lives of all of our fellow citizens. As administrators and leaders of the junior colleges of America, you face a great challenge and a great opportunity to render real service to our country.

Unity in Diversity

THEODORE A. DISTLER

IT WAS NOT lightly that I entitled this address, "Unity in Diversity." The very fact that your Board of Directors invited the executive director of a sister association to be with you and address this convention attests to their recognition of one of the weightiest obligations resting on American educators in these critical days—the obligation to work together in harmony in the performance of our common task.

Education beyond the high school is provided in the United States through a variety of institutional patterns unparalleled anywhere else in the world. We have colleges that offer education for the two years following graduation from high school—colleges that offer four-year courses leading to the baccalaureate degree and stop there, colleges that go beyond the initial degree and offer master's or even doctoral programs in certain fields, and universities, which of course combine undergraduate instruction with a vast range of graduate study. In addition to all these, there are a great variety of more specialized institutions, like teachers' colleges and engineering schools, which provide professional preparation at the undergraduate level or the graduate level or both. In your Association and mine alike, there are both tax-supported and privately

endowed institutions, colleges that are affiliated in various degrees with one or another of the churches and colleges with no such affiliation.

To extol this diversity as one of the glories of our American system of education, and to speak of it as constituting the strength of that system, has become a standard text for the speeches that educators are always making to each other and anybody else who can be induced to listen. But surely we do not praise this remarkable diversity simply because variety is pretty and amusing. And we should be on rather weak ground in suggesting that diversity is in itself a source of strength. There is a saying that "strength lies in unity." And certainly a Russian might retort that on the basis of recent evidence a monolithic system of education need not fear comparison with our boasted diversity. In fact, diversity in education is praiseworthy—and indeed justifiable—only if it offers the individual student the best assurance of full opportunities for developing his particular talents and the nation the best means of developing its human resources.

As a matter of history, each of the different kinds of higher education in the United States came into being to meet a definite social need that people recognized at a particular time. The first liberal arts colleges were established in the American colonies on the Oxford and Cam-

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bridge model to ensure that the churches should not lack a literate ministry. The land-grant colleges were created by the Morrill Act of 1862 to provide education in the agricultural and mechanical arts for young people who did not look forward to careers in the "learned professions" for which the traditional college education was designed. The two-year colleges were developed, almost entirely in the present century, to meet the needs of those who did not wish to commit themselves to four years of post-secondary education or were unable or unwilling to face the expense of attending a college far away from their homes.

In passing it may be noted that each of the last three centuries has made a distinctive contribution to the growth of our unique system. If the liberal arts college is the characteristic expression of American zeal for higher education in the eighteenth century (for very few indeed of our colleges go back before 1800) and the land-grant college constitutes the corresponding achievement of the nineteenth century, surely the junior college occupies the same place in the twentieth century. Perhaps with the accelerating rate of technical and social change, we shall not have to wait until the twenty-first century for our next great advance in higher education. It may not be too rash to look for it in direction of vastly expanded facilities for adult education through the new media of mass communication. In any case I hope that American higher education has not finished with experiments, for there are still wide fields of possibility to be explored. And I believe that an educational system—or for that matter any form of human organization—that is not growing is decaying.

To return to my thesis, historically American education has developed step by step in response to felt needs, and the diversity that has resulted is justifiable in our own day only insofar as it meets the varied needs of the individual and the society, now and for the future. All my instincts and training dispose me to believe that a broad diversity of educational opportunity is alone compatible with the democratic ideal, but I would be willing to see it all scrapped in favor of a single, uniform system of higher education if I could be convinced that by this means we could do a better job for the youth of America. In fact I think we could do much better if we constantly looked at our responsibilities as educators in the context of social need.

If we face our task in that spirit, we shall strive to shake off outworn prejudices and hollow snobberies. We shall try to understand what our colleagues in other branches of education are trying to do and why. We shall try to reach general agreement on the proper role of each element in the total system. We shall seek to achieve articulation between the successive stages of education, from kindergarten to graduate school, so that each individual student may be enabled to follow a continuous and coherent process of development, with sufficient impetus to carry over beyond the end of his formal education. And equally we shall seek to promote what I may call "horizontal articulation" so as to facilitate transfer from one kind of institution to another—if this turns out to be demanded by the student's personal growth.

A choice of roads offers little advantage over one single road if there is no possibility of interchange among them. Di-

versity is not necessarily synonymous with flexibility, and flexibility is what we must have if we accept the proposition that the needs of the student, as a maturing member of a civilized society, must be paramount. Diversity of method and approach must be combined with unity of aim and planning. This is the unity in diversity for which I plead.

Personally I represent, as you may know, an association that includes in its membership well over a third of all recognized institutions of higher education in the United States, but which, nevertheless, speaks for only one element—though I believe a vital element—in the educational system. You will perhaps wish me to say a word or two about the role of the four-year college of liberal arts and sciences and its relationship, as I see it, with the functions of the two-year college.

Let me begin by telling you what I mean by "liberal education," a concept that is naturally associated with the liberal arts college. Quite simply, liberal education means to me a process by which we seek to help young men and women to grow into better men and women, as distinct from any process of making them better at something else. This process has vocational value because, as John Stuart Mill said, "Men are men before they are lawyers or physicians or manufacturers; and if you make them capable and sensible men, they will make themselves capable and sensible lawyers or physicians." But even if Mill had been mistaken, a form of education aimed at enabling the individual to develop into the best that he has in him to be, *as a person*, would still be indispensable, as we can see by inspection of the results of any method of so-called education that is di-

rected solely toward the training of men for one particular form of activity.

If we accept this definition of liberal education, it follows that all education must be in some measure liberal in order to be education, for this is what distinguishes it from such enterprises as training a seal to balance a ball on its nose or teaching a chimpanzee to ride a bicycle. Of course it does not make much sense to speak of liberal education in relation to children at an age when their education is closely linked with physical growth—when they are merely getting acquainted with the basic uses of their mental faculties. Even at that stage, I suspect the good teacher will always have one eye on the man or woman that the boy or girl will become.

When we reach the post-secondary stage, education to be worthy of the name must be concerned in some degree with the man or woman and not merely with the chemist, the mother, the doctor, or the secretary. If so, liberal education cannot be the exclusive preserve of the liberal arts college. It must enter the aims and methods of the teachers college, the community college, the engineering school, the graduate school, as well as the four-year college of liberal arts and sciences. And let us be clear that liberal education is not primarily a question of subject matter.

Personally I find it hard to believe that cosmetology can be as liberal as biology, salesmanship as mathematics, but American history or Elizabethan literature or organic chemistry can be taught in a manner that contributes nothing to the student's intellectual growth. I think we must admit that some subjects lend themselves more readily than others to this

end, and that by and large these are the more general or fundamental disciplines as distinct from specialized applications of knowledge to practical purposes.

Essentially liberal education is a matter of spirit more than content. Nor should we kid ourselves that the college whose declared purpose is general education—whether it is a four-year or a two-year college—can ignore the vocational aims of its students. If we did, we should be attempting to do something to which Bologna, Paris, Oxford, and all the classical prototypes of liberal education never aspired.

We may hope to inspire in the boys and girls that come to us a love of learning for its own sake. We may hope that they will leave our campuses more inclined to read books than, according to the pollsters, the average American seems to be, that they will be capable of looking at pictures and listening to music with enjoyment and understanding, that they will be able to bring an enlightened and humane judgment to bear on the problems that will confront them as citizens. But we must not forget that at least part of their aim in coming to us is to equip themselves to make their way in the world.

The difference between the liberal arts college and the professional school at the undergraduate level is essentially a difference in the degree to which the curriculum is determined by vocational aims. The professional school is concerned primarily with vocational preparation, and what it teaches will be largely determined by that function, although the teaching should be intellectually stimulating and not a mere drill. In the liberal arts college, vocational preparation must take second place to the development of men and women who think for themselves and

who will look on the world around them with critical appreciation and sympathetic understanding and who will not be content to get by in the world as it is but will devote some part of their time and energy to making it a better place. Within this philosophical framework, the variety of programs and methods offered by liberal arts colleges is extremely wide.

You must not think of the liberal arts colleges as traditionalists who exclude from their concept of liberal education any subject or any way of teaching that would not have been acceptable to Erasmus or Abelard. On the contrary, there is no branch of higher education in which there is more active experimentation with new methods and programs or within which one can find more variety. You will understand what I mean if you are familiar, for instance, with St. John's College in Maryland and Sarah Lawrence in New York, Carleton in Minnesota, Reed in Oregon, and Antioch in Ohio, to speak only of independent colleges without mentioning the undergraduate colleges of the great state universities, such as the Basic College of Michigan State.

Liberal education is by its very nature dynamic and experimental. But what of the relations between the four-year colleges and the colleges—now nearly as numerous—represented by the American Association of Junior Colleges?

First, let me repeat what I said a few minutes ago about discarding outworn prejudices and hollow snobberies. It is useless to deny that, as John Gardner, President of the Carnegie Corporation of New York, pointed out in a recent speech, people insist on looking down their noses at the two-year college. Unfortunately higher education has become identified in

many minds with attendance at a four-year college, though not necessarily it seems with completing the four-year course to graduation. Nowhere is snobbery so much out of place as in education. But I realize how hard it is in a society with a strongly egalitarian tradition and an obsession with quantitative standards of measurement to persuade people that a two-year course may be just as good, qualitatively, as a four-year course and may suit the needs of a particular student far better.

We have a hard row to hoe in persuading the American people that equality of educational opportunity does not mean the same kind of post-secondary education for all but rather an equal opportunity for all to get whatever kind of higher education is best suited to their individual talents, tastes, and aptitudes. If we fail to do so, the nation and the individual will pay a heavy price in social waste and personal frustration. We must therefore strain every nerve to promote what Dr. William C. Fels has called "parity of esteem." I recognize that the prime responsibility for promoting this parity of esteem must rest on the four-year colleges and universities, which, on a superficial plane of judgment, are the beneficiaries of wrong-headed infatuation with the four-year course. It is obviously easier for them than for the two-year colleges themselves, which might be suspected of merely putting out their own commercials. In fact, I believe that the four-year colleges and universities have as strong a ground of enlightened self-interest as the junior colleges for promoting a commonsense attitude to this question.

Quite apart from the interests of the individual, it is wasteful and demoraliz-

ing for an institution to have to spend its time and energy on students who will not stay the course because they are not suited to that particular form of higher education.

On the strength of more than thirty years' acquaintance, at first as well as second hand, with the four-year colleges, I am sorrowfully compelled to admit that they are burdened with many students who are only there because they don't know any better, because they or their parents or their advisers thought they ought to go to college and that "college" meant the traditional four-year course.

In my view, the two-year college is the right place for the student who wants to continue his formal education beyond the high school but is not positively attracted by the academic and professional opportunities offered by the four-year course, and I mean attracted by those educational opportunities, not by the glamour of a famous name. Such a student is by no means necessarily an inferior student. It may, of course, prove that two years of post-secondary education are as much as he can turn to good account, but equally he may be what we call a late bloomer, or a boy of great intellectual capacity who has not been stimulated by his school education to put out the best that is in him. In either case the junior college may strike a spark that will fire the boy to go on to academic endeavor beyond his earlier dreams.

It follows, unless I am much mistaken in my judgment, that we need many more two-year colleges, that the fabulous expansion that we have seen in the last four or five years must continue for a long time to come. Indeed, I believe that the junior colleges will, and ought to, absorb

a major part of the so-called tidal wave of students whom we may expect to see clamoring at the college gates within the next ten or twelve years. If the four-year colleges and universities are wise, they will encourage the establishment of two-year colleges and will, if necessary, lend their aid in the work either in the individual communities with which they are associated or within larger patterns like that into which the University of California has entered with so much enthusiasm and success.

It follows, too, that no unnecessary barriers should be allowed to stand in the way of students who wish to transfer from one type of institution to the other. I see no reason why a four-year college should as a matter of course grade a student transferring from a two-year college as *C* regardless of his actual record. It should surely be possible to work out some arrangement that would take proper account of the merits of the individual. Nor need this involve the adoption by junior colleges of curriculums exactly paralleling the first two-years of the four-year college course, for it is just as legitimate and desirable for the two-year college as for the four-year college to experiment with new programs of general education. The ideal is surely for the transfer student to be treated exactly on a par with the student at the same level of ability and preparation who has spent his first two post-secondary years in a four-year college.

Similarly, it is hard to see any good reason why the honor societies should not admit the student who has spent his first two years in a junior college on the same footing as the one who started out in a four-year college, provided that he is equally well qualified by character and

attainments. No test other than personal suitability makes any sense to me. Why should the academicians lag behind the more advanced athletic conferences, which allow the participation of transfer students immediately on their admission to a four-year institution?

Again, I can think of no good reason why the junior college graduate should not enjoy the same scholarship opportunities as many colleges give to their own outstanding students in the freshman or sophomore year. Indeed, I would go further and suggest that four-year colleges and universities ought to consider reserving a number of scholarships expressly for students contemplating transfer from a junior college.

The ideal we should all pursue is the greatest practicable measure of coordination and flexibility throughout the educational system. It is in pursuit of that ideal that the Association of American Colleges, as the national organization of liberal arts colleges, has persistently endeavored to promote consultation and cooperation between its own members and other branches of education.

For several years past our Commission on Professional and Graduate Study has been quietly working with representatives of the professional and graduate schools to achieve better understanding between the two types of institutions and more effective coordination of their programs. A striking symbol of this collaboration was the recent publication by my Association, with the support of the Association of Graduate Schools, of a "Guide to Graduate Study" and "A Directory of Fellowships in the Arts and Sciences."

Latterly, at the other end of the scale, so to speak, our Commission on Liberal

Education has taken the lead in seeking some constructive action as an alternative to the long standing, academic custom of blaming the high school for all the shortcomings of college students. The commission is promoting local conferences between college and high school teachers and administrators, in relation to both general programs and particular disciplines, with the aim of developing smoother transition and better articulation between the levels of education. Now, with the active encouragement of the Board of Directors and executive staff of your association, we are turning our attention to relationships between the two-year and the four-year college.

As a first step, the two associations have set up a joint committee, which held its organizational meeting last November, met again in January at Miami Beach where the Association of American Colleges was holding its annual meeting, and is now meeting for the third time, here in

Grand Rapids, in conjunction with your own convention. I have great hopes for this joint committee. It has started, quite properly, with trying to identify the areas in which problems arise and where both sides may be in need of enlightenment about each other's aims and methods. I hope it will be able to move on fairly speedily to the formulation of solutions for some, at least, of the problems I have touched upon.

In any case it cannot but be good for us to explore both our similarities and our differences with the common aim of rendering the best possible service to our young people and through them to the American nation. The effective development of our human resources is indispensable to our national survival, and mere survival will have little value unless what is preserved is a dynamic society in which every single person has unlimited opportunities for developing his God-given talents.

Diversity—A Fact and a Responsibility

LELAND L. MEDSKER

MORE THAN 300 years ago the founders of the first American college at Harvard declared as their purpose "to advance learning and to perpetuate it to posterity; dreading to leave an illiterate ministry to the churches when our present ministers shall lie in dust." It is interesting to speculate on the bewilderment that would be theirs if by some means these men could awaken to review with us the characteristics of a program in higher education which they established so long ago.

The surprises and the satisfactions to the founding fathers would surely come from learning both about the magnitude and the diversity of collegiate education. For from one college with a limited purpose in 1636 the United States has progressed to the point of approximately 1,900 collegiate institutions in a pattern so complex and with aims, purposes, and students so varied as almost to defy description.

If it were our privilege to describe our system of higher education to these men of the past, undoubtedly we would grope first for a taxonomy to use. Quickly we would realize that any one set of descriptive measures is incomplete because it does not include others equally important. Finally, with great oversimplification we would speak *first* about the great variety

of *types* of institutions. We would point to the fact that the nearly 1,900 higher institutions include junior colleges, four-year colleges, colleges that offer programs leading to a master's degree, and complex institutions offering a doctor's degree. We would be quick to follow with the statement that variety in *size* even excels the variety in type. A referral to the Office of Education directory would make possible a statement on the variety in control of these institutions—control by state governments, by local governmental units, by private auspices, and by various church organizations.

A word about variety in program would then be in order. To describe the pattern of liberal arts programs, the growing number of professional schools, and the move toward more graduate programs in more institutions is only part of the picture. State colleges of a general nature with rapidly expanding functions and programs, the curriculums in teachers colleges, technical institutes, and other specialized institutions add to the story. We would observe that among the same general types of colleges there is no uniformity, no stereotype.

Finally, something about the types of *students* enrolled in our higher institutions should be said. We would speak about the degree to which higher education has been democratized. We would comment on the social and prestige factors related to col-

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lege going in America. We would report the wide variety of persons who enter college—persons who differ in aptitude, in achievement, in interests, in age, in goals, in motivation, in marital status, and in practically every other conceivable way.

This would be our brief description of diversity in higher education in general. In this description the junior college was merely mentioned. Our assignment now is to place it more fully in the context of post-high school education in America and then to comment on the implications of its role to those of us here assembled.

In many ways there is no more appropriate state in which to do this than in Michigan. It was in this great state that two early events occurred which were of importance to the future of junior colleges, and it is here where one finds an example of a rapidly growing junior college movement today. One of the early events was the recommendation on the part of the first executive head of the University of Michigan, Chancellor Henry P. Tappan, that the University become a bifurcated institution in which the work of the freshman and sophomore years be turned over to the schools below. Here was the germ of the junior college idea.

The other historical event in Michigan was the famous Kalamazoo Case in 1874. This legal decision which confirmed the right of communities to support high schools by taxation undoubtedly paved the way for the same right with respect to community colleges and avoided a long, tortuous legal experience for those which are supported in whole or in part by local communities.

Perhaps the best approach to this somewhat difficult assignment is to attempt an analysis of the influence which the exist-

ence of the two-year college is exerting on the total pattern of higher education. To do this it may be helpful to make an assumption at the outset. May I therefore propose this simple premise: The two-year college adds to the uniqueness and diversity of American higher education to an extent and in a manner that is to the best interests of society.

Doubtless most of you would agree with this premise but having stated it we need now to ask and attempt to answer certain questions. Among them are: (1) What are the theories as to how the junior college is *supposed* to affect higher education? (2) In practice, are these effects about what they are presumed to be? (3) Do the claims made by and for the two-year college prove to be valid? (4) Does it appear that society's welfare is served well by a system of higher education that includes the two-year college as an integral part?

A generalized response to such questions might be that the two-year college, by whatever name it is called, increases diversity in two ways. First, it constitutes one more type of institution with a somewhat different set of functions to add to the entire range of higher institutions and their complex of programs. Second, the two-year college itself is as diversified as any other segment of higher education and thus it spreads the fan even farther. There is no use to belabor this point with this audience. Each of you is well aware of the different types and sizes of the two-year colleges you represent, of the different plans for their control and support, of the differences in their student bodies, and of the variety of programs they offer. All this we acknowledge. It would be superfluous for us to review it here.

But since such a generalization does not adequately answer the query as to how American education is different, if at all, because of the two-year college, more concrete effects should be identified. One presumed effect is that the junior college makes opportunity for post-high school education available and attractive to more people. The somewhat different admission requirements and other factors characteristic of the junior college account in part for this fact, but the existence of an institution close to the homes of potential students is greatly more significant. There is documentary evidence that proximity of an institution is a factor in college going and that even students who "go away to school" tend to go to nearby institutions. It is doubtful that many would question the supposition that more people now enter college than would be the case were there no junior colleges.

A second influence of the junior college is the redistribution of students among types of institutions and the resulting change in the character of many four-year institutions. Obviously, if all students now in junior colleges were in senior colleges, senior college enrollments would be greater to that extent and their programs would be adjusted accordingly. But this is not the case, and in many states students are taking their lower division work in a two-year college in increasing numbers. An analysis of Office of Education data shows that for the country as a whole in 1956 the "Level I" institutions, which are essentially the two-year colleges, accounted for 12 per cent of the total students enrolled. Even more significant is the fact that the Level I institutions enrolled 23 per cent of the students enrolled in college for the first time.

More concrete data on this point are found in several individual states. In 1957 the 15 public junior colleges in Michigan enrolled approximately 17 per cent of the total college enrollment in the state. Seven years earlier in 1950 the then existing 10 public junior colleges enrolled only slightly more than six per cent of the total enrollment. Furthermore, data from 53 of the 61 Michigan institutions show that for the current school year the two-year colleges enrolled approximately 30 per cent of the students in college for the first time. In California in 1955, approximately 60 per cent of the freshman and sophomore students in all higher institutions, both public and private, were enrolled in public junior colleges. Other states in which the proportion of students in two-year institutions is high include Texas, Illinois, Mississippi, Colorado, and Oklahoma. Additional states which are rapidly establishing two-year colleges may shortly experience the same distribution of students.

Such tendencies have many effects. For one thing, they result in an increasingly higher proportion of upper division and graduate students in many of the four-year colleges and universities. The availability of junior colleges enables many senior institutions to set higher standards for admission and still not deny college opportunity to students within the state. Such developments as these suggest that there may be further changes ahead in the pattern of college going and in the tendency for many four-year colleges and universities to become largely upper division and graduate institutions.

Another effect of the junior college is the expanded curricular offerings and services presumably made available to the public through this type of institution.

Curriculums leading to employment at the end of a one- or two-year period, programs for those with educational deficiencies, special community services, and programs for adults are assumed to be more numerous because of the existence of the two-year college, both public and private. It appears, furthermore, that this assumption is a reasonably correct one and that a *somewhat* greater diversity of programs does result from the existence of the junior college.

But there remains the question of whether the two-year colleges have been as productive in the diversification of curriculum as has been expected of them or as they have claimed to be. For a junior college to say in the front of its catalog that it exists to serve many groups of students with different vocational and educational objectives is one thing. The nature of the curriculums which are outlined further on in the catalog is another. The extent to which these curriculums are actually offered is even more important. Of greatest significance is the number of students who actually enroll in other than the conventional freshman and sophomore college programs.

In our study of two-year colleges in the Center for the Study of Higher Education at Berkeley we found that in 70 representative two-year colleges in 15 different states only a third of the students in attendance the fall semester, 1956, were enrolled in a definitely structured terminal program or at least had declared themselves as following a sequence of courses with an immediate vocational objective in mind. There was naturally a considerable degree of variation among types of colleges and even among colleges of the same type. But even when the data

were summarized for public junior colleges which declare themselves as comprehensive institutions, the percentage for the group was not increased materially.

The fact that two-thirds of the students were enrolled in curriculums leading to transfer is not inconsistent with the report made by officials at most of the same colleges to the effect that at least two-thirds of the students declare their intentions to transfer at the time they enter junior college. This aspiration is usually, as you know, that of the parents as well as the students.

But let us look at another side of the same coin. Most of these same colleges made a longitudinal study of the students who entered as freshmen in September, 1952. It was found that for *all* institutions in the study, both public and private, only a third of the entering students subsequently transferred. Note how exactly opposite this is to the original student aspirations reported and to the enrollment data by programs. Again, there was a wide range in the percentage among colleges and among types of colleges. There were also differences as between men and women students.

Such data as these—and time does not permit an analysis of them here—serve to illustrate a very real problem confronting the two-year college. For one thing, they point to some discrepancies in claims made for and by the junior college in terms of its uniqueness and its effectiveness in actually producing greater diversity. In addition, the data show the inconsistencies between what students aspire to do and what they actually do, and this is one problem which raises numerous significant questions, many of which are closely tied to the cultural values of our society.

All this notwithstanding, the role of the two-year college—or at least its potential role—in extending diversity of curriculum must be considered one of its assets. Moreover, there is little reason to doubt that in the matter of increasing opportunities for students at all ages to remove earlier educational deficiencies and also in the matter of extending educational opportunity for adults, the junior college has an enviable record in producing diversity both in theory and in fact.

No discussion on the contribution of the junior college to diversity would be complete without some attention to the types of students whom it attracts. Though there are those in junior college circles who are loath to admit that in general the level of ability of two-year college students is somewhat lower than of those in four-year colleges, there are others who look upon this factor as one of the values of the institution. It should be remembered, of course, that there is a great overlap in the abilities of students in different types of colleges. For example, in the *Restudy of Higher Education* in California in 1955 it was found that the median scores on the ACE of freshman entrants to a number of the junior colleges were higher than in some of the state colleges despite the fact that there were selective admission requirements in the state colleges and none in the junior colleges.

Implied in this discussion is perhaps one of the most interesting and significant points of all; namely, the tendency for the junior college to constitute a growing middle area in education which has no real counterpart in any other part of the world. For while in some countries there are intermediate institutions not too different in level from our junior colleges, they

exist for more specialized purposes. The two-year college in America, being generally available to all high school graduates and discharging multiple functions, serves a highly heterogeneous student body. Some students enter it knowing full well what they want to do and are able to carry through. Others enter with goals which are unrealistic. Others have no goals, and in this group there are students with high ability. Partly through self-direction and exploration on the part of the students and partly through counseling and the imposition of academic standards on the part of the college, students go from the junior college into other institutions, into employment, or into other pursuits; and the theory is that their next station is more realistic by reason of their having attended the two-year college. Long ago Koos referred to this as the "isthmus" function of the junior college. Some refer to it as the screening function. A more appropriate term may be distributing agency.

We now move to the question of what responsibilities such facts as we have reviewed seem to suggest to those involved in the two-year college movement. Obviously, it will do little good for us to consider the role of the junior college as we see it in Grand Rapids this week unless we translate the facts in terms of their meaning to each of us as we return to our respective institutions next week.

Let me say, however, that in making some of the statements which follow I do not have in mind specific institutions or individuals. Further, I do not consider that in my own case I have been any more inclined to accept certain responsibilities than anyone else.

The place of the two-year college and its relationship to all higher education sug-

gest to me two major groups of responsibilities. The first is that as junior college workers we begin to look at ourselves and our institutions as realistically as possible. The second is that we give serious thought to how we can make good the claims made for the junior college.

If a single characterization could be made of us who have worked long in the field I think it would be that we have so often placed ourselves in a defensive position. This in turn has led to unusual and often conflicting modes of behavior on our part. On the one hand we have frequently been over-zealous about the junior college, even to the point of becoming evangelistic in its behalf. On the other hand, we have frequently felt left out as if we were poor cousins of higher education and have reacted accordingly. A well-known authority in the field of higher education in a leading university—not the University of California, I might add—recently made this statement: "While I am committed to the idea of the junior college, I sometimes have a hard time understanding junior college people. The leaders tend to operate so much like a clan that I frequently feel that their *only* interest is that of promoting their cause." It may be that in many instances we have done too much talking to ourselves, saying the things about the junior college that we most like to hear and sometimes emphasizing what is theory rather than what is fact. In the last year or so we have all been glad to quote frequently—and rightly so—from the favorable pronouncements about the junior college made in so many published reports of high level agencies and commissions all over the country. But in my own case at least I sometimes felt as if I were assuming an "I-told-you-so" attitude

as I quoted, taking a peculiar delight in implying that at last some people were beginning to realize the potential of the junior college!

Your reaction to such statements may be that we have been placed in a defensive position by lack of understanding of and sympathy for the junior college on the part of many people, including some in our own profession. Admitting this, and also recognizing that in the history of any social institution there is required a long period for its nurture, I simply suggest that each of us examine our own attitudes and determine the most becoming mode of behavior with regard to an institution that is now an integral and recognized part of higher education. In this we shall have to remember that the junior college is not *more* important than any other higher institution but that it simply completes the continuum of diversity. Its importance lies in the relationship it has to the whole of higher education. It has come of age. We need neither defend it nor apologize for it.

In this connection, there could be raised the question of why some junior college administrators either initiate or so easily succumb to local pressure to make their junior college a four-year college. Though the incidence of such cases is still rather low, the communities in which it is discussed and the apparent latent desire to implement the idea are sufficient to cause one to wonder whether the incidence may become higher. This is not to imply that there are never situations where conversion of a two-year to a four-year college is maybe logical and desirable. If we contend so vigorously that the junior college has a uniqueness and plays so impor-

tant a role, how can we so easily relinquish it?

But looking realistically at the junior college involves more than mere examination of attitudes toward it. It involves also the necessity for continuous research and experimentation of the type that produces objective information on the results of the institution and what they may be under various circumstances. Here the private junior colleges have an unusual opportunity in the years ahead to be bold with their experiments which may be significant to them as well as to the public colleges.

Let us turn now to the second cluster of suggested responsibilities—those which have to do with fulfilling the claims made for the junior college. In a sense I like to think of these as the obligation on our part to justify the role that society seemingly has assigned to us. If in America there has come to be a certain growing dependence on a type of institution for the performance of certain unique functions in our system, there ought to be some assurance that these functions are adequately fulfilled.

As a matter of fact, it is this very claim of uniqueness that should bear inspection first. The term is heard so often, but what does it mean? About two weeks ago a conference was called in New York City to consider some of the problems facing junior colleges and possible solutions to them. Present at the meeting were several individuals from outside the college field. More than once the question was asked by people in industry and in other agencies regarding just how the junior college is unique. To explain convincingly to an intelligent lay person is not easy. Perhaps it isn't easy because our junior colleges are

not always unique, or because we have not really defined uniqueness. If any or all of these conditions are true, it may be well for those responsible either to be sure that the junior colleges of America meet the criterion of uniqueness, whatever it is, or stop talking about it. Perhaps we should consider that the real pioneering days of the junior college are over and that henceforth the institution will be known more by its results than anything else.

All this suggests a clear analysis of the aims and objectives in the individual junior colleges. It suggests professional leadership which interprets what society at large and the college constituency in particular expect of the institution. It suggests that the junior college should have a reason to exist other than merely to help provide space for the oncoming increase in college enrollment. It suggests a responsibility for developing new and different curriculums designed, housed, taught, and interpreted to the community in a way which creates maximum interest in them. It suggests the special community services that help make the public junior college unique. It suggests the responsibility for a guidance program that requires specialized and clerical personnel, which is costly in terms of finance, and which must be rated fully as important as instruction. How other than through such steps can the junior college perform its role?

It may well be that the immediate years ahead will bring an even greater insistence that the junior colleges, particularly those under public control, meet certain criteria. As a state makes provision for junior colleges within a system and gives more financial aid to them, the state has some responsibility to expect the fulfillment of the functions on which financial aid is

based. In one of the states in which state financial aid was materially increased in 1957, one educator—himself a junior college enthusiast with keen insights in the legislative process—put it this way: "The junior college administrators," said he, "should realize that the legislators are now going to expect the colleges to do some of the things the administrators have said all along should be done but have contended that they could not finance without adequate state aid."

Two final but very important responsibilities seem incumbent upon us. One is that of achieving the highest degree of articulation with the high schools and the senior institutions. I happen to know that President Adams very appropriately plans to deal with this in his message at the banquet session of this meeting, and certainly he will do it better than I. It is merely mentioned here so that we may note it as a requisite in a pattern of education which utilizes multiple types of institutions in an over-all system.

The other responsibility is that of maintaining adequate academic standards. Again, any system which relies so heavily on the institution between the high school on one hand and senior colleges and additional outlets on the other hand requires that a thorough job be done in the middle institution. With increasing heterogeneity of student bodies in many junior colleges, the maintenance of standards is not easy. It should be reported that in our current study at Berkeley we will be able to present evidence from between 15 to 20 colleges and universities over the country concerning the performance of junior college transfers and of how their performance and retention compares with that of native students. Though not yet quite

completed, this phase of the study reveals that the transfer students in most colleges do almost as well scholastically as the native students but that the rate of attrition for them is considerably greater than for the native students. The latter comparisons may reflect more on counseling and articulation than on standards. However, with the present general interest in quality of instruction and the ever increasing number of students who pass through the portals of the junior college, the obligation of it to maintain high standards is apparent. Without such, the system could well break down.

These are a few of the responsibilities. They are almost frightening when one realizes that with the recent rapid ascendancy of the junior college, the whole nation is looking to us to perform our functions well.

If you will pardon a personal reference, I should like to close by saying that 19 years ago this week I attended my first meeting of the American Association of Junior Colleges in this hotel. It has been my privilege to attend all but one of the intervening meetings since that time. The 19 years have been interesting, challenging ones devoted mainly to the junior college, both in connection with an institution and through Association activities. It is significant to note that some of the problems under discussion 19 years ago are the ones we are still concerned about. For example, it was at the 1939 meeting that a committee on vocational education made its report which led to the creation of the Commission on Terminal Education. Today we are almost as perplexed as then about the problem of preparing young people for employment!

But institutional needs are never com-

pletely satisfied; they are merely modified in the context of contemporary circumstances. Plato once said, "Nothing ever is but is always becoming." From Harvard's founding until now, American higher education has been in the process of "becoming." Since the turn of the

century the junior college has made an increasing contribution to variety and diversity in American higher education. To the extent we believe that this contribution has been in the best interests society will be fortified to accept the awesome responsibilities in the years ahead.

Everybody Needs a Liberal Education

THEODORE O. YNTEMA

WHEN I was invited to speak here, I replied that it had taken me 25 years to develop a speech on liberal education, that the speech was printed and widely distributed, and that I didn't have much else to say on the subject of education. I was told that I could say it again. If, therefore, some of my words have a familiar ring, it is because I have had only a few ideas in my life, and I cannot talk on subjects unless I have had the opportunity to study them and think about them at some length.

I am deeply honored to be here. I am honored to speak to you because I feel that you in education are more important than any other group in determining the future of our country.

I propose to address myself to two questions:

(1) What is a "liberal education"?

(2) Why does everybody need a liberal education? By liberal education I mean basic education, i.e., the kind of education that everybody needs. This quickly brings me round the circle of logic and in effect reduces the two questions to one and implies that there is a larger hard core of education that everybody needs—and it raises the question as to what the hard core is.

Most of my life has been spent in teaching and research. In the university, teaching and research constitute nearly the whole job of the professor. In business

they constitute an important part—a surprisingly important part—of the job of the executive.

As I have struggled with some aspects of education and reflected on my own experiences, some tentative ideas on the substance of education and the content of the curriculum have gradually taken form. My experiences have led to these conclusions.

For my analysis I would classify a liberal education into four parts. These are the acquisition and development of, respectively:

(1) A considered sense of values based on philosophy, religion, and experience.

(2) The basic abilities and skills that are widely transferable and needed in nearly all walks of life. In this category I include mastery of the scientific method; understanding people and working with them effectively; communication; organization (the marshaling of scarce resources for given ends); wholehearted and persistent application to the task at hand; and memory.

(3) A judiciously selected knowledge of classified facts and relationships.

(4) Joy — satisfaction — well-being — (whatever you call it)—in the exercise of one's faculties in perceiving, hearing, teaching, in doing, in all the various aspects of life.

One has achieved a liberal education if he has a sense of values thoughtfully evolved—if he has the basic skills and abilities generally needed to do the world's work—if he has a fair amount of classified and ordered knowledge—if he finds satisfaction in work and play, and enjoy-

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ment in the good things of life. In addition, of course, one may—and an educational person often does—possess specialized competence in some particular field of knowledge or activity.

Clearly, liberal arts education is designed to develop a sense of values, to impart systematic knowledge in various fields, and to help acquire joy in doing and living. There is no other kind of education designed for these important goals. A liberal education, formal—or gained the hard way by personal observation and individual study—is a *sine quo non* of a full life.

But what of the second count? Are there skills and abilities that are widely transferable from one field to another—skills and abilities that are needed to do the world's work? Can a liberal education develop these skills and abilities? Are most programs of liberal education properly designed to develop these skills and abilities?

From experience, observation, and discussion, I am convinced that there are basic skills and abilities widely useful and transferable from one field of work to another. Many men prepare for one career but shift with little or no handicap to another. Executives move from one kind of a job to another—often with greater success than if they stick to one specialty. I have seen a number of persons who were successful in teaching and research move easily to success in business. Consultants tackle problems with which they have little prior acquaintance and solve them readily. In my own experience I have been amazed at the transferability of abilities and skills as I have shifted from one career to another and from one job to another. What impresses me is how much

the requirements for various jobs have in common, and how easy it is in most instances to pick up the special knowledge in a particular field.

I do not imply that if you have the basic skills and abilities you can overnight become a great mathematician, or physicist, or musician, or writer, or dancer. There are some careers that require special talents—and often prolonged development of these talents. But even in these careers the basic skills and abilities are usually necessary or very helpful. What I am saying is that most careers require the same basic skills and abilities, and in many such careers these basic skills and abilities constitute a substantial part of the requisites for success.

Why should this be so? The reasons are not hard to discover.

First: The scientific method, the process of seeing and solving problems, is universal; moreover, it is largely (although not wholly) invariant from field to field in its basic characteristics.

Second: Almost all careers involve relationships with people.

Third: A vital aspect of relationships with people is communication.

Fourth: In practically all situations we are engaged in organizing scarce resources to achieve some given end. The general principles of such organization are common to various fields of endeavor.

Fifth: Achievement calls for persistent effort.

Sixth: Some memory is required because we cannot operate with an empty head.

Let me restate these points in terms of the personal experiences we have. In almost any kind of career—

(1) We will have to recognize problems and solve them; i.e., we will have to use the scientific method—which in its essentials is universally the same.

(2) We have to work with people. To do this well we have to understand them, size them up, motivate them, lead them, follow them, cooperate with them, love them and be loved by them.

(3) We have to communicate our ideas to other people and receive communication from them.

(4) We have to organize—organize our own activities and these of others for whom we are responsible.

(5) We have to work at our job—keep on working, and like it.

(6) We have to memorize faces, names, and facts important to our job.

My own life has been full of surprises, and I suspect many of yours may have been, too. We can prepare for these surprises and opportunities by getting a liberal education with special attention to the full development of these basic skills and abilities needed in practically all walks of life.

Let me say a few words about each of these six basic skills and abilities.

First, the ability to use the scientific method. The scientific method is the process of seeing and solving problems. It involves observation, the detection of similarities and dissimilarities in phenomena, the tentative specification of categories and relationships based on observation and on deduction from prior discoveries, and the testing of such tentative hypotheses by experiment and experience. Logic and mathematics and statistics are, in various degrees and forms, required in particular applications of the scientific method. The roles of mathematics and statistics in the physical, biological, and social sciences are established. I believe it is generally not realized, however, that

certain concepts in mathematics and logic have widespread application to the ordinary problems of business activity and, in fact, of life. These concepts include (among others) rate of change, acceleration, rate of relative change, and particularly the conditions for a maximum or a minimum. (We are forever trying to maximize or minimize something that depends on other variables.)

I have found the mathematics of inequalities and certain pervasive ideas of the calculus and statistics invaluable in many situations. If I were a student, I would make sure they were in my schedule.

The most important part of the scientific method, however, is the part most neglected in education—namely, *seeing* problems. Observation of phenomena, the perception of possible uniformities or relationships, and the specification of hypotheses in form to be tested—invention, if you will—are given lip service but often get scant attention.

The scientific method is not the prerogative of the physical, or biological, or social science. Science and the scientific method are not the same thing. A science is a body of systematic, ordered knowledge. The scientific method is the process of seeing and solving problems. Most students in the physical, biological, and social science do not master the scientific method—because most of them do not learn to see, or perceive, or invent. I believe the scientific method (including learning) should be one of the prime objectives of a liberal education. There should be more room in the curriculum for invention, creative thinking, and the specification of hypotheses.

Maybe things are different now, but when I was young I learned as much

about the scientific method working on the farm and going fishing as I did in college. It is true I got good training in mathematics, i.e., much training in observation, in seeing, in developing hunches, in invention—which are even more important than the more routine processes of specification of the hypotheses and formal testing. Most education, at least in my time, involved too much spoon-feeding—too little emphasis on observation, detection of problems, and development of ideas as to their solution.

As soon as we rise above routine work, we get into problem recognition and problem solving. The facts may vary from field to field, but the fundamentals of the scientific method are universal. If we develop skill in seeing, specifying our hypothesis and testing it, a large part of these skills and habits of thought will be transferable to new fields.

Understanding people and working with them effectively is the second of the transferable skills and abilities. This, to me, is one of the most perplexing fields of learning. Because of these perplexities there is a tendency in college to concentrate on impersonal facts and ideas. When you get out of college, you are going to have to pay a lot more attention to people. My controller often says to me with great wisdom, "The technical problems we can lick—the really tough problems are people." To work with people well, we have to understand them—how they act and react and, insofar as possible, why they react as they do. We have to size them up—their demonstrated and especially their potential abilities. We have to learn to take orders, to give orders, to join with our colleagues in common effort, to touch base with interested parties, to motivate

people to the action we want, to lead and to follow, to trust the people who can be trusted, and to rely on the people who can be relied on. We can't know too much about our fellow men. It will help greatly, too, if we can genuinely like our fellow men and conduct ourselves so as to have their respect, their trust, and their affection. If we know how to win friends and influence people, I will give you long odds on success in almost any field.

In my college days, understanding people and working with them effectively was almost entirely an extra-curricular matter. I do not think this should be so. Students learn about people incidentally in their curricular and extra-curricular activities, but I do not believe that our systematic knowledge of this subject is so limited or that the subject is so unimportant that it should be left out of the curriculum for a liberal education.

My third point has to do with communication—in written and spoken form. This is a subject much discussed and needing much discussion, and upon which I still have only a few passing remarks. The most important ingredients in effective communication probably are first, clarity of thought, second, understanding people, and third, hard work.

Mathematics is another aspect of communication which I think is often neglected. We forget mathematics as a language and very effective means of communication. Let me consider two aspects of mathematics as an important form of communication: first, in dealing with assumptions—rabbits in a hat; second, the language of economics. I decided to study economics and registered in a course in graduate economics. I did not know the structure and thought of that field. All the

other students in the course had had undergraduate work in this field, and after two weeks I was lost and could see me failing the course. I took a book on economics home to study in which there was a mathematical appendix. After studying this appendix thoroughly, the next morning I was at the head of the class.

Fourth, we come to organization. In every aspect of life, we try to utilize scarce resources to achieve in the best possible way some given end. Here is a process universal in our experience—a process susceptible to analysis and generalization. It involves such basic ideas as classification, order, and rational planning. In the life of an individual it means planning his activities, budgeting his time among them, and meeting deadlines. In group activities it involves defining jobs, assigning responsibilities, developing means for coordination and supervision. It would almost seem to be belaboring the obvious to say that organization should have an important place in a liberal education.

Fifth, there is the matter of effort—persistent application to the job at hand. I have seen talented drones fail and second-rate intellects crash through to success by hard work. All the abilities in the world are not worth much unless they are really put to work with perseverance.

In this list of generally useful skills and abilities memory is probably a poor sixth. Nevertheless, many a man by memory of events and faces and names has come far beyond his competition who, in analytical capacity, outrank him.

Let me summarize what I have said so far. There are transferable abilities and ways of work which are important in many fields. They are:

- (1) Mastery of the scientific method (including observation and invention)—problem recognition and problem solving.
- (2) Effective communication.
- (3) Understanding people and skill in working with them.
- (4) Organization of activities.
- (5) Persevering effort.
- (6) Memory of facts, faces, and names.

The acquisition of these skills and abilities is an important part of getting a liberal education. When I advance this thesis, I usually meet various objections. The first is that people are born with these talents—that they either have or they don't have them. I would concede that some people seem to be born with greater capacities for development than others. I would not concede, however, that a student, particularly the better student, cannot learn perception, or invention, or how to deal effectively with people. Does not the man know more about these things than the newborn baby?

Then I hear the second objection: "You can't teach these things." Well, you can't teach anybody anything; you can only help him to learn. As Dean Berry of the Harvard Medical School says so well, "Educate is not a transitive verb. You can't educate anybody but yourself." The question isn't whether you can teach invention, getting along with people and organization, the question is whether you can learn these things. If you can learn them, they have an important place in any proper scheme of liberal education.

The decline of the small farm and of the small business centered in the home has been a calamity for education. Sons and daughters of successful executives or professional men, most of whose life is spent outside the home, a life in which they do not participate, have a real handi-

cap as compared with a boy or girl who grows up participating in the work of the farm or small business centered in the home. With this separation of the home from economic activity and the decreasing opportunities for the children to learn invention, organization, and getting along with people in a purposeful setting at home, the burden that must be assumed in the school increases. I do not mean that these skills and abilities should be learned only in schools and colleges, but I do say that it is the business of the schools and colleges to inform the students of the pervasive importance of these basic skills and abilities and to help them, as far as may be, to acquire them.

Sometimes I suspect that the courses offered and prescribed in plans of liberal education are too much determined by the fields of specialization that constitute the frontiers of knowledge for research. Invention and creative thinking, working effectively with people, and organization are not recognized as fields of learning. Neither the specialists nor the materials for learning in these fields are available. Consequently, these fields tend to become neglected.

Mathematics and logic broke away at an early stage from the substantive areas of their application (although, even today, we find courses in mathematics of finance, mathematical statistics, etc.). In breaking away another difficulty was encountered. Mathematics tended to develop and to be taught as a subject in and for itself. This is fine for the man who wants to become a mathematician. It is not so fine for the ordinary student who would use the mathematics all his life if he could only see the embodiment in reality that corre-

sponds to the abstraction he learns in mathematics.

This is, of course, a subject for another speech or series of speeches. So I shall only touch on the idea. Arithmetic—counting, adding, subtracting, multiplying, and dividing—these are concepts that we use everyday and have counterparts in our experience. Beyond arithmetic, mathematics tends to be regarded as mental gymnastics—or something the scientist or engineer is going to need. Actually, we engage every day in activities that have their counterparts in mathematics. There are certain ideas in mathematics that are amazingly pervasive in our life. These are the concepts that everyone of you should know and understand, both as abstractions and also as embodied in a wide variety of human experience. These concepts are not readily distinguishable in the text books, and when you run across them nobody tells you of the wonderful uses to which they can be put. Incidentally, a number of these concepts appear in the calculus—and ought to take precedence over many of the techniques in trigonometry, algebra, and analytical geometry.

Neither isolated facts nor pure abstractions are of any real use. Only when facts are fitted into patterns and relationships do they have any meaning or usefulness. Similarly, only when abstractions have embodiments in reality do they help in dealing with real problems. I do not object to the accumulation of new facts and the development of new mathematical theories. These are needed to push out the boundaries of knowledge. Here I am talking about education—in particular, liberal education. My observation has been that often in education we get too many facts and not enough relationships, patterns

and, if you will, cause-and-effect explanations. On the other hand, mathematics often stands as an abstraction with little recognition that some parts of it contain the basic ideas that occur and recur in our everyday life. One of the marks of an educated man—perhaps the most distinguishing mark—is his ability to use what he knows in new situations. Once this is learned there is almost no limit to what he can do.

Here, I believe, we have the criterion by which we should judge professional and vocational education. Unless a vocational course is intended to develop a skill that is either widely useful or of great importance per se, I do not believe it belongs in our universities or colleges or high schools. Some of the courses in medical education—surgery, for instance, or anatomy—are narrowly vocational but are per se important. But a raft of other specialized courses could be dropped from our secondary schools and colleges with great economy and benefit to all concerned.

I suggest, however, that those in the liberal arts should not look down their noses at all of the work done in the professional schools. Part of what goes on in business schools, in law schools, and in some medical and engineering schools is designed to fill the voids that are left by the usual liberal education. I refer particularly to the process of seeing problems, to the application of logic and mathematics in their solution, to organization (the marshaling of scarce resources for given ends), to the essentials of communication, and to the art and science of dealing effectively with people. The attention of the country is focused on education as it never has been before. This has happened because of the critical shortage of re-

sources for higher education and because of the dramatic development of education—especially scientific education in Russia.

If there is general need of basic education and if there is a larger body of transferable skills and abilities, there are important implications for the crisis in higher education and for scientific education in particular.

Thousands of potential scientists are lost to science each year because of deficient training in mathematics, in problem solving in the high schools and junior colleges. If there were adequate instruction offered in these fields, and if such work were required of all students, the supply of potential scientists would be greatly increased. I suspect that no other action would help as much in the race with Russia as the improvement and general requirement of education in mathematics and problem seeing and problem solving in high schools and colleges.

As far as the crisis in higher education is concerned I suspect larger economies would be possible if we could see more clearly what a basic education really is and then if we could go about providing it as economically as possible. If we discovered, as I am sure we should, that all students should spend the major part of their time trying to acquire the same kind of education, it would mean the sloughing off of large numbers of inconsequential courses and courses attended by few students. By concentration on the central core of basic education it would be possible to see more clearly what such education should aim to do for the student, to improve the texts and other instructional materials, and perhaps to use large scale devices such as movies and television more effectively and

thus bring men with great talents as teachers to more students.

I am not arguing against experimentation, diversity, and specialization in various aspects of education. What I am saying is that the highest common factor in higher education is very high, and we do not really take advantage of that fact.

In closing, let me repeat once more what seems to me the substance of a liberal education. It is the acquisition and development of, respectively:

(1) A considered sense of values based on philosophy, religion, and experience.

(2) The basic abilities and skills that are widely transferable and needed in nearly all walks of life. In this category I include mastery of the scientific method, understanding people and working with them effectively, communication, organization (the marshaling of scarce resources for given ends), wholehearted and persistent application to the task at hand, and, finally, memory.

(3) A judiciously selected knowledge of classified facts and relationships.

(4) Joy—satisfaction—well-being (what ever you call it)—in the exercise of one's faculties in perceiving, hearing, teaching, in doing all the various aspects of life.

These ideas, of course, are not new. Most of them were voiced with great elegance 105 years ago by John Henry Cardinal Newman in "The Idea of a University." I quote from "Discourse VII, Knowledge Viewed in Relation to Professional Skill".

"A Liberal Education—

... is the education which gives a man a clear, continuous view of his own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them. It teaches him to see things as they are, to go right to the

point, to disentangle a skein of thought, to detect what is sophistical, and to discard what is irrelevant. It prepares him to fill any post with credit, and to master any subject with facility. It shows him how to accommodate himself to others, how to throw himself into their state of mind, how to bring before them his own, how to influence them, how to come to an understanding with them, how to bear with them. He is at home in any society, he has common ground with every class, he knows when to speak and when to be silent, he is able to converse, he is able to listen, he can ask a question pertinently, and gain a lesson reasonably, when he has nothing to impart himself, he is ever ready, yet never in the way, he is a pleasant companion, and a comrade you can depend upon, he knows when to be serious and when to trifle, and he has a sure tact which enables him to trifle with gracefulness and to be serious with effect. He has the repose of a mind which lives in itself, while it lives in the work, and which has resources for its happiness at home when it cannot go abroad. He has a gift which serves him in public, and supports him in retirement, without which good fortune is but vulgar, and with which failure and disappointment have a charm. The art which tends to make a man all this, is in the object which it pursues as useful as the art of wealth or the art of health, though it is less susceptible of method, and less tangible, less certain, less complete in its result."

Not all of us—certainly not all of our students—will be able to achieve in full a liberal education. But it is a goal which even the least of us should have.

Quality in Higher Education

JOHN W. GARDNER

THE QUESTION of reconciling quality and quantity in higher education is becoming the favorite puzzle for those who are seriously interested in our colleges and universities. Sooner or later each of us must take his turn at trying to solve it. It reminds me a little of a passage in Mark Twain's *Connecticut Yankee in King Arthur's Court*:

The boys all took a flier at the Holy Grail now and then . . . you see, it was just the Northwest Passage of that day. . . . Every year expeditions went out holy grailing, and next year relief expeditions went out to hunt for them. There was worlds of reputation in it, but no money.

Humorists must have their fun, but if I remember King Arthur's court, searching for the Grail was about the most sensible thing "the boys" did. So I have no hesitation in taking my flier at the problem of quality and quantity in higher education.

I should like to begin by saying that *no* institution of higher education should for one moment discard the notion that the years ahead may provide it with significant opportunities to upgrade itself. I am afraid we have fallen into the habit of thinking that the only institutions which will profit by the years ahead are those that intend to hold size constant, raise

entrance requirements and tuition, and ride the wave of enrollments to new prosperity and higher standards. Too many have fallen into the habit of thinking that the institutions that traditionally "meet the public where it lives" will inevitably suffer. I do not accept this and I hope that you will not.

The years ahead are certain to be years of great popular interest in higher education. The problems we face and the great difficulties we shall encounter in solving them are certain to keep higher education in the limelight. And this is good. As the colleges and universities become crowded, public interest may take the form of vigorous criticism. But that is all right too. What the colleges and universities cannot stand is public apathy. It will be better to have the public grinding its teeth about higher education than yawning over it. So long as the public is vitally interested, any institution seriously concerned to upgrade itself will find important opportunities to do so.

And by "upgrading itself," as I shall explain later, I do not mean changing itself into some other kind of institution. I mean equipping itself to meet its own chosen objectives more adequately.

This is a policy that should be dictated by institutional self-interest, if nothing else. In the years ahead there is going to be a far higher degree of awareness of quality differences in higher education.

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Young people are going to be more discriminating shoppers in higher education than they have been in the past.

Arguments about quality in higher education tend to be rather heated and—it must be said—rather pointless. There are many reasons why such conversations become muddled, the foremost being that they so often degenerate into arguments over “elite” versus “mass” education. People who engage in these arguments remind me of the two washerwomen whom Sydney Smith observed leaning out of their back windows and quarreling with each other across the alley: They could never agree, Smith observed, because they were arguing from different premises.

In the case of arguments over “elite” versus “mass” education, I am convinced that both premises should be vacated because behind the arguments is the assumption that a society can choose to educate a few people exceedingly well *or* to educate a great number of people somewhat less well, but that it *cannot do both*.

There are a lot of things wrong with this assumption. First, a modern society such as ours cannot choose to do one *or* the other. It has no choice but to do *both*. Our kind of society calls for the maximum development of individual potentialities *at all levels*. Many Americans still regard education as a luxury, a high-minded activity which is all right if society can afford it. This is strictly a 19th century view. Today we cannot afford *not* to have it. It is an absolute bedrock necessity, central to our present strength and to our future growth. It is essential to discard the whole concept of two categories of higher education—*elite* and *mass*, or *quality* and *quantity*.

Let us think of American higher education as involving many different kinds of institutions, each with its significant part to play in creating the total pattern. Let us recognize that we have profited enormously by the diversity of American higher education. Let us resolve that the various kinds of institutions shall play their different roles with honor and recognition.

There is a conception of democracy which asserts that everyone must be like everyone else. This is a perfect formula for the destruction of all individuality and for the machine tooling of human beings as interchangeable parts. It is the essence of social life that people must play different roles, and it destroys the texture and meaning of life to make those roles interchangeable. A son cannot change places with his father. The male dancer who catches the ballerina when she leaps cannot demand that she in turn catch him. Other examples may suggest themselves. The discipline of roles is as necessary in a democracy as in any other society, but it is only workable in a democracy *so long as all the roles are honorable and decently rewarded*.

The same may be said of the roles which institutions must play. We do not want all institutions to be alike. We want institutions to develop their individualities and to keep those individualities. None must be ashamed of its distinctive features as long as it is doing something that contributes importantly to the total pattern and as long as it is striving for excellence in performance.

Failure to recognize this principle can be not only unfortunate in human terms but costly in institutional terms. One of the best hopes of relieving some of the

pressure of our four-year institutions is the two-year college. But one of the reasons the two-year college has not grown more rapidly to meet the obvious need is that in some sections of the country people insist on looking down their nose at it. It is a pretty expensive look down the nose.

We cannot hope to maintain diversity in the system unless we honor the various aspects of that diversity. The small liberal arts college should not be afraid to remain small. The large urban institution should not be ashamed that it is large. The technical institute should not be apologetic about being a technical institute. Neither coeducational nor non-coeducational institutions should feel it necessary to explain why they are one or the other. Each institution should pride itself on the role that it has chosen to play and on the special contribution which it brings to the total diverse pattern of American higher education.

But what about quality? What about excellence? Are we turning our backs on the fact that there are differences in the extent to which colleges and universities meet these standards? Not at all. But we need a totally new conception of quality in higher education—a conception that would be applicable in terms of the objectives of the institution. As things stand now the word excellence is all too often reserved for the dozen or two dozen institutions which stand at the very zenith of our higher education in terms of faculty distinction, selectivity of students, and difficulty of curriculum. In these terms it is simply impossible to speak of a junior college as excellent. Yet sensible men can easily conceive of excellence in a junior college.

The traditionalist might say, "Of course! Let Princeton create a junior college and one would have an institution of unquestionable excellence!" That is correct, but it leads us down precisely the wrong path. If Princeton Junior College were excellent in the sense that Princeton University is excellent, it would not be excellent in the most important way that a junior college can and may be excellent. It would simply be a truncated version of Princeton. A comparably meaningless result might be achieved if General Motors tried to add to its line of low priced cars by marketing the front half of a Cadillac.

We shall have to be more flexible than that in our conception of excellence. We must develop a point of view that permits each kind of institution to achieve excellence *in terms of its own objectives*.

In higher education as in everything else there is no excellent performance without high morale. No morale, no excellence! And in a great many of our colleges and universities the most stubborn enemy of high morale—and therefore of excellence—has been a kind of hopelessness on the part of both administration and faculty, particularly the latter—hopelessness about ever achieving distinction as an institution.

Not only are such attitudes a corrosive influence on morale, they make it virtually certain that the institution will never achieve even that kind of excellence which is within its reach. For there is a kind of excellence within the reach of every institution.

Not only is there a kind of excellence within the reach of every institution, but our continued strength (and even survival) as a society may depend upon achieving that excellence. And I must tell

you that achieving it will be an exceedingly difficult, even painful, task. It is too easy to assume that we can meet the threat by voting bigger defense budgets and paying more taxes. That is the easy part. The real question of whether we meet the threat to our society depends upon our capacity to achieve, or to maintain, or in some cases to recapture the vitality and excellence of our institutions. And chief among those institutions are our schools and colleges.

But for an institution such as the college to re-examine its goals in cold honesty, to reappraise the means it has adopted for achieving those goals, to reject ruthlessly the practices which are only "fairly good" and to strive stubbornly for the best—this is supremely difficult. The pain of the outraged taxpayer facing a higher defense budget is sheer whimsy beside the pain of a professor whose pet course must be stricken from the catalogue, or a department chairman who must drastically revise departmental offerings, or a dean required to reorganize the entire curriculum.

But there is no way around it. The times offer no alternative. Our strength and vitality as a society depend upon the strength and vitality of our institutions.

Fortunately, the junior colleges, representing a relatively new movement in higher education, may face the necessary reappraisal and redoubled effort with less pain than some of our more bewhiskered institutions. A young movement is always apt to be a more creative movement and a more vital one. I say "apt to be" because it is not inevitable. Sometimes even the supporters of a very young movement become so engrossed in telling themselves that they are the wave of the future that

they become smug and lose the capacity for growth.

It would be a grave disappointment to the friends of the junior college movement if these institutions failed to maintain the creative initiative which they now enjoy. It would be a grave disappointment if they were to slip back at this early period in their history into habits which they cannot break, into practices that they worship without thinking, and into traditions which are ill-fitted to the times. As young institutions they carry a particularly heavy responsibility to re-examine themselves cheerfully and energetically, to overhaul themselves as drastically as need be, and to provide a much-needed element of creativity in our system. Fortunately, the junior colleges are capable of meeting this challenge. They do have vitality. They *are* sufficiently young so that they can still accomplish major changes in their own organization. And they are still sufficiently far from hardening of the arteries so that they will not be afraid to look with ruthless honesty at their own performance.

Precisely because the junior college movement is a vital one, I am confident of its capacity to put into effect the two measures which I regard as essential to its future.

The first measure is vigorous self-appraisal. Each junior college should ask itself with the most searching honesty what its objectives are, what it is trying to accomplish. Then it should examine with the utmost candor the effectiveness of the measures it has adopted to achieve these goals. And finally it should cleave to the most effective measures and discard the rest. It does not matter whether all junior colleges agree either on objectives

or on measures. It does matter very much that each engage in a vital reappraisal of what it is about and that it sift its practices in terms of its own best judgment. The outcome will be good.

The second measure is to demand excellence. Each junior college should demand much of itself and much of its students. It should drive itself to the best performance of which it is capable and should demand of its students that they also give their best. Observers of American higher education have noted astonishing differences between educational institutions in the level of effort required of the students. Note that I am not speaking here of differences between institutions in *quality of work*. I am speaking of differences in level of effort: how hard each student is required to work. Such differences are not easily justified. There may be great differences in level of ability and these must be recognized. But students at every level of ability should be required to perform up to the best that is in them.

We must never assume that youngsters who are not equipped to attend the most intellectually demanding colleges are incapable of rigorous attention to *some sort* of standards. One of the most appalling and unhappy errors that we can make is to assume that youngsters incapable of the highest standards of intellectual performance are incapable of any standards

whatsoever and can properly be subjected to a slovenly educational regime. Though we must make enormous concessions to individual differences in aptitude, we may properly demand that every form of education be such as to stretch the individual to the utmost of his particular potentialities.

Never let your students believe—and never let yourselves believe!—that excellence is a monopoly of the graduate or professional school. Excellence is where you find it. I would extend this generalization to cover not just higher education but all education from the vocational high school to the graduate school. There may be excellence or shoddiness in every line of human endeavor. We must learn to honor excellence (indeed to *demand* it) in every socially accepted human activity, however humble the activity, and to scorn shoddiness however exalted the activity. There may be excellent plumbers and incompetent plumbers, excellent philosophers and incompetent philosophers. An excellent plumber is infinitely more admirable than an incompetent philosopher. The society which scorns excellence in plumbing because plumbing is a humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water.

The Continuing Thread

ARTHUR S. ADAMS

EVER SINCE October 3, 1957, when Sputnik I took to outer space, we have all been impressed with the dramatic increase in public attention to education. Newspapers and magazines have been strengthening their staffs and allotting increased and far more prominent space to education than ever before. Television presentations on public issues seldom fail to give prime attention to education. Even in informal gatherings education as a subject for conversation now takes the lead everywhere. Soviet Russia has succeeded in focusing attention upon education in a way in which we in education have long sought to do. This is all to the good, as I am sure you will all agree, for without public concern, concern so deep that it leads to action, we who are professionally concerned with education are strictly limited in the amount of improvement of education that we can accomplish.

The present public concern about education, however, is even more diverse than our educational system itself. I know that you have seen many headlines in recent months, but let me remind you of a few which indicate the many-sided comments that reflect public concern about education: "Moscow School Reflects Change;" "Business Boosting Aid to Colleges;" "AEC Enlists Colleges' Aid for Training;"

"Special Training for Gifted Urged;" "Industry Woos College Students and Borrows Faculty Members;" "Schools Cautioned on Giving Science Excessive Stress;" "Educational Elite Seen Alien to U. S.;" "Educators Told Culture Is Vital in U. S. Economy;" "Universities Tied to Bad Education;" "Interest Is Aroused in Question of How to Improve Quality of College Training;" "At Last: Public Wakes Up to U. S. Education;" "Colleges Blamed for Bad Schools;" "Writer Notes War on Brains;" "Educational Research Unity Urged;" "Future Course of Schools at Stake;" "Record 3,068,000 at Universities and Colleges." The list can be extended a long, long way. The point is that current public opinion is addressed to so many different facets of education that the individual citizen has a hard time to determine the full magnitude of the problem. And so, confused and a little bewildered by the variety of judgments thrown at him, what does the average citizen do? He immediately starts appraising the problem in terms of his own education. Just think of how many comments each of you has heard that start with the phrase, "Now when I went to school. . . ." The fact is, of course, that the world has changed mightily since this citizen did go to school. Therefore his recollections are apt to be completely out of focus.

Let me give you an example from the time when I taught school. Much has been

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said about the teaching of science and especially about the teaching of physics in secondary schools. It was only 25 years ago that the teaching of physics could be neatly and logically organized in terms of the mechanics of Newton with subsequent sections of instruction on heat, electricity, magnetism, light, and sound. But in 1933 a number of experiments were being successfully made that disclosed the nature of atomic structure. And these discoveries opened up a whole new world of physics. What was to be done? Should the rapidly accelerating body of knowledge of the new physics—quantum mechanics, wave mechanics, nuclear structure and all the rest—be added as additional chapters in the textbook? I may say this was tried, but it was not very successful. I know because I tried it. The very ideas involved in nuclear study forced modifications of the previous notions of Newtonian mechanics. It is only within the last two years that this problem has been clearly recognized, with the result that new textbooks are now being written which take into account the enormous impact of the newly found knowledge. Consequently, when a citizen who is 45 years old starts talking about the instruction he had in physics, he just isn't talking about the same thing as what is needed in physics instruction today.

Let us take another subject, mathematics. And let me recite a personal experience. Years ago, I was a teacher of mathematics and thought I understood pretty well the nature of sound instruction in that subject. A few weeks ago, I participated in a conference on the academically talented, not as a representative of the American Council on Education, but as a former teacher of mathematics. Well I can say that I understood the words my

fellow conferees were using but the organization of the curriculum and the concepts involved in it made me feel like Rip Van Winkle. I know my associates in the section in which I worked must have wondered where I had been, for a number of my questions caused them to give me what I can best call patient answers of explanation. Again, the reasons for these changes are clear. The enormous development in the sciences which use mathematics has required new developments, new emphases, and new extensions of material, which were not needed before.

Yet there is a clear, continuing thread in the development of this subject matter of instruction. The big mistake occurs when we try to appraise what was done in education of the past generation in terms of what is *needed* to be done in order to prepare the present generation for the future. It is precisely in these areas of curriculum that cooperative and coordinating efforts are urgently needed in all divisions of higher education. Those in higher education complain about inadequacies in secondary education. Those in secondary education complain about the lack of the understanding of their aims and objectives by colleges, universities, and the public. Just as there are many in the American public that seem to be seeking a scapegoat for what is claimed to be the inadequacy of American education, so do some of those in various divisions of education look for somebody else to blame for their troubles.

We in education have spoken with many voices. It is easy to understand why the public is confused, uncertain, and bewildered by these many voices. Yet among us, I submit, that there is a clear understanding of the propositions we all

believe and in which we would like to have the American public believe. The Problems and Policies Committee of the American Council on Education in recent weeks has been concerning itself with just these basic propositions of understanding. The result has been the unanimous endorsement of certain propositions by the members of that Committee. I offer them to you with the earnest hope that you, too, will not only endorse them yourselves but will seek time and opportunity to make them a real part of the understanding of your students and your constituencies.

1. Most Americans now realize that our leadership, and indeed our national survival, is being challenged as never before in history. Most Americans must be brought to realize that the survival and well-being of this nation depend no less upon the strength of our educational system than upon the strength of our military establishment.

2. Educational institutions in a democracy are properly expected to meet the fundamental needs of society. If they are subject to passing whims and fancies, schools and colleges cannot perform this function. Responsible citizens share with educators a moral obligation to insist upon wise and careful planning to meet fundamental needs and to protect our educational institutions from hysterical demands and panicky reactions.

3. Critical analysis of our educational system is certainly in order, but mistaken efforts to place blame through name-calling and fault-finding should not be permitted to obscure the fact that our schools, colleges, and universities are seldom much better or worse than their respective publics want them to be. The best of our institutions certainly rise above common levels of aspiration; yet the vast majority simply mirror the values most commonly held. If American education is to undergo a general improvement, the people at large must place a higher value upon intellectual achievement and must be prepared

to uphold higher levels of educational performance.

4. Lip service to the value of education is not enough. The critical need is for material support. The American people can afford to spend more on education. Doing this, however, will necessitate assigning a much higher priority to the importance of teaching and research as crucial forms of enterprise in a dynamic society. There must be a willingness to practice self-denial in paying higher taxes and in making heavier voluntary contributions to provide greater material support for education.

5. The time factor is extremely important, and basic issues must be faced now. Nothing less than a massive national effort, launched immediately, will do. Local support and control will remain the best safeguards and guarantors of excellence for our diverse educational system. They can and should be preserved, but bickering over forms and sources of financial support necessary to meet the present emergency can be disastrous. Positive and immediate action on all levels—federal, state, local, and voluntary—is the first imperative.

6. Economic inflation has already levied a heavier toll on educational institutions than on most other forms of enterprise. Still further inflation would be a more serious threat. If this possible consequence of vastly increased governmental expenditures for education is to be avoided, investment in our schools, colleges, and universities must take precedence over existing expenditures which are of less importance to our national security.

7. The total economic resources available for higher education, whatever they may be, will necessarily exist in limited amounts. One demand upon those resources is to raise the general level of performance in all schools and colleges. If this is allowed to be the only call, however, a tragic mistake will be made. A second, and vital, call upon our economic resources is to strengthen our leadership in all important fields and to add to our best existing institutions the appreciable support needed to meet the demands for the highest order of quality. Statesmanship must see to

it that adequate support for the attainment of both goals is provided.

8. A genius of American education has been its unity through diversity. This diversity should be preserved, with strengthening all along the line and greater stress on the importance of quality everywhere. In short, all our human resources must be vastly strengthened through the medium of improved education.

Now let me come to the case of the junior colleges which have enjoyed a remarkable growth over the past 60 years. This growth could only have occurred in response to a genuine need for such a type of institution. I say this categorically, for I believe deeply that in our American system of education, with its diversity and local support and control, no institution will flourish unless its constituency believes it should be supported. But as I have said before, the junior college has an unusual place even as yet not clearly defined. On the one hand, it may be thought of as an extension of secondary education; on the other it is viewed as the first two years of higher education. Along with this, many public junior colleges provide astonishingly broad service in adult education. Because of the junior college's key location in the transition between secondary and higher education, it undoubtedly has the most difficult job of coordination of any segment of education. In its terminal courses, it must coordinate its instruction with the needs of business, technology, and industry in order that its graduates may find ready employment and find themselves at home in that employment. It must coordinate its efforts with four-year institutions of higher education in order that its graduates who have had its lower division work may suffer no loss of time or energy in moving

on successfully to upper division study. It must coordinate its program of adult education with both of these so that all of its components receive their proper share of financial and instructional support. Finally, within its structure, it must effect such coordination as to provide constructive ways in which students in any one of its three major divisions may transfer to another division for which they are better qualified. Indeed, the responsibility of the junior college is great. Its opportunity is equally great, for it can play the key role of helping the individual to find the right track, the track best suited to his capacities and interests.

In order to do all of these things, the junior college needs truly understanding relationships with four-year colleges; it needs equally understanding relationships with business, technology, and industry, and it needs understanding relationships with secondary schools. Just what do I mean by understanding relationships? Let me get down to fundamentals. The same questions that I mentioned at the outset apply here. The first such relationship strikes me as being concerned with curriculum. The actual content of the courses of study taught in the junior college needs to be designed for that purpose indicated for the students who will take the course. If the course is in aircraft maintenance and repair for terminal students, the course should have solid content in those subjects needed to prepare a student for this sort of work. With the rapid development of the types of aircraft and types of engines that propel them, the content of the course would have to be organized to take account of such present and prospective development. In a lower division course looking to subsequent transfer for

upper division work elsewhere, the content of the course should be just as thorough as would have been required in a four-year institution. In the junior colleges that I have visited, I am happy to report that just these conditions are being met. And these arrangements work effectively in the relatively limited geographical area when people are well informed about the institution and its work. Difficulty arises, however, when an individual student for one reason or another moves out of that region.

The plain fact is that the distinctive functions of the junior college are not generally understood, nor is the nature of the particular courses that are offered. Personally, I don't believe anyone is to blame for this situation. Even though junior colleges have been in existence for 60 years, I think it is entirely understandable that the public and those in four-year institutions have been so preoccupied with their own problems that they have had neither time nor has there been sufficient demand for them to take time to determine the multiple functions of the junior college. On the side of the junior colleges, I am sure it is fair to say that they have been so everlastingly busy with the problems associated with their growth that they have had neither time nor personnel to establish all of the multiple relationships that are called for. Happily, however, there are positive signs of increased awareness of the importance of just these problems of coordination. Junior college representatives are sitting down with representatives of four-year institutions, and each is coming to understand better the problems of the other. Likewise, increased emphasis is being given to good counseling of students in both junior colleges and in

four-year institutions as well as in secondary schools. The evidence is clear that all along the line increased recognition is being given to the importance of fitting the individual student for that educational opportunity for which he is best qualified and in which he has interest. After all, it is the individual student's education which is of top importance.

I would hope that in the future another element would be added to this. I would hope that each student would come to have a lively awareness of what the educational process is, what he is expected to get out of it, and how he can increase its usefulness and significance to himself. For generations commencement speakers have harped on the theme that commencement is only the beginning of one's education. I fear that in the main their exhortations have fallen on deaf ears. We must find a way to develop in each student, no matter what type of formal education he undertakes, a real understanding that the pace of the world today requires that he continue on his own initiative to grow in knowledge and understanding throughout his life. To me it is difficult to understand why so little attention is given in our schools and colleges to the nature of education. We all claim vigorously that each student must know something about health, something about the economic system of free enterprise, something about our political structure and the individual's place in it, and something about the nature of our society. At the same time, we assert emphatically that the survival and well-being of this nation depend as much upon the strength of our educational system as upon the strength of our military establishments. But where does the student, the average student, learn anything

about the nature of our educational system? True it is that if he is preparing for a career in teaching, he does receive instruction on this subject. But this is professionalized instruction. Outside of this field, the sum total of what he learns about the educational process is the result of his own experience in it. Thus it is that when public attention is focused on education as it is today, the only basis the average citizen has to form his judgment is that of his own experience.

Let me quickly state that I am not advocating the addition of a course in the theory of education to an already overloaded curriculum. Perish the thought! I do suggest, though, that it is possible in many informal ways and within a well-defined curriculum for the student to come to a far better understanding of the American educational system than he has today. Likewise, I would hope that with such understanding it would be possible to quicken the sources of initiative of each student in order that he may gain a new sense of responsibility for his education, that he undertake to do things of educational value on his own, and so light the fires of curiosity, judgment, and personal concern to know, that he would continue his education long after his formal schooling has ended. Let me be specific. Because of the same crucial position of the junior college in the transitional area between secondary and upper division education, I believe the junior colleges have an es-

pecial responsibility to acquaint their students with the whole range of educational opportunities offered in the American schools. I believe that the junior colleges have the responsibility to stimulate their students, all of them, to assume the same initiative in their education as their adult students already have. I believe finally that because of the impressive growth of the junior college enrollment which surely seems ahead, much can be done in these institutions to inform future citizens of the importance of the propositions concerning education which need public understanding and which I mentioned earlier.

And now let me close with the thought that in all of our thinking about education, we have been too exclusively concerned with providing education and educational opportunities *for* students. Perhaps we have not seen, as clearly as we might, that education is the interaction of the teacher and the student. Perhaps we need to think more about the educational process *with* students. In future years it is to them, as citizens, that we must look for support of education. If they do not understand the process, if they do not understand its importance, if they do not believe in its values, then I submit we have not built adequately for the future. The continuing thread is the education of the individual. If this thread is broken, at any point, it is the fabric of American society that suffers.

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